Marta Peris-Ortiz · José Álvarez-García
Editors

Health and Wellness Tourism

Emergence of a New Market Segment

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Foreword

Health tourism is probably one of the fastest growing forms of tourism. Health tourism is a rather multifaceted industry since it has several segments. We can talk about medical tourism, wellness tourism, spa tourism, and holistic and spiritual tourism. In most countries, spas are key elements of the supply in the beauty and luxury segments. This is particularly the case for Western European, most Asian or North American markets. On the contrary, there are several countries around the world that have been developing tourism based on natural assets, such as hot springs or healing microclimate. Although there are numerous countries that have rich natural resources, e.g. Japan, South-Korea and New Zealand, in these countries hot springs have been used for wellness and not for medical services.

Central and Eastern European, as well as many Southern European countries, such as Russia, Romania, Hungary, Serbia, Czech Republic, Slovakia, Bulgaria, Slovenia and Italy, Spain and Portugal have been using their hot spring resources for healing and medical services. The thermal or hot springs of Spain, Italy and Portugal are key elements of thermalism and balneotherapies which are administered and supervised by medical personnel. Many facilities (baths, sanatoria, hotels, rehabilitation centres) as well as destinations have rich history since the high classes have been turning to natural healing for centuries. After the Second World War, due to the democratization of healthcare based on natural healing assets, several facilities were built, extended or refurbished. Health tourism to these centres is a key form of tourism in most of the mentioned countries.

This volume presents a wide range of work. The variety of the cases and examples ensure the reader that health tourism, especially health tourism that builds on natural resources, is most certainly a very prosperous field for development. The chapters highlight some really important questions and challenges the industry is facing.

Chapter 1 discusses the ever critical questions of relevant legislation. There is very limited EU level regulation and legislation exist that would relate to thermal resources. Nature or heritage protection legislation may not focus on the key points the protection of thermal assets would need, therefore these questions are really of paramount importance.

Chapter 2 gives an international overview of thermalism in terms of its possible use in health and/or wellness tourism. How old fashioned structures and facilities could and should face the expectations of new segments and the competition created by new facilities and industries leaves players with a lot to accomplish. Chapter 10 discusses in what areas of life and lifestyle thermal resources and approaches can bring change to one's life and therefore can improve wellbeing and quality of life.

Franchising as a management and expansion concept arrived to the world of spa and wellness in the last 5–10 years. There are several companies and brands that could benefit from this. Still, as we can see it in Chap. 3, there is no uniform solution for success. Franchisors and franchisees need to provide solutions for several questions and what works in one franchise may not work for another.

Marketing in health tourism is exceptionally complex. This is due to the sometimes very different understandings of the same words in countries, cultures or languages! Chapter 4 highlights the opportunities and challenges of cross-border cooperation in branding. Chapter 5 has a case from Italy. The authors carried out a comprehensive research which looks at how guests of either traditional or 'new' segments may consider the existing supply of thermal springs and destinations.

Thalassotherapy enjoys a new revival. This traditional healing (and wellness) approach has been available for a long time at seaside destinations. Still, in the last couple of years, destinations, spa and beauty brands rediscovered thalassotherapy. Three chapters focus on the various aspects of thalassotherapy. Chapters 6, 7 and 8 look at the various aspects of quality management in the Spanish thalassotherapy centers, such as motivation and barriers of implementing such standards.

Chapter 9 discusses a rather complex as well as very important question, i.e. the wellbeing of senior segments (or the questions of ageing, if you like). The introduction of some key findings of the research under the IMSERSO Program can provide input for further development and policy making in thermalism.

This title is a great collection of cases, best practices and development ideas, as well as challenging questions. Thermalism or thalassotherapy have been around for some time and have their traditional uses. Still, there are new ways, forms and approaches that can and should be considered. As it is suggested by the authors, natural resources in health, wellness or healing can bring in new alternatives through which wider spectrums of the society can improve their health and wellbeing.

Budapest, Hungary László Puczkó, Ph.D., C.M.C.

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Chapter 1
A Comparative Study of Thermal Legislation in the Galicia–North Portugal Euroregion

Ana Ladeiras, António Mota, and Mª Carmen Pardo

Abstract Thermalism is a key socio-economic activity for the Galicia–North Portugal Euro-region. It also acts as a pillar to support other activities, is a net contributor to employment and regional wealth, and provides an opportunity for growth that has yet to be maximized. It is a heavily regulated activity at various stages of its production process, guided by multiple entities (in health, tourism and geology spheres) whose competencies often overlap. Moreover, it is subordinate to a variety of technical and administrative procedures, making it an activity that requires excessively demanding administrative processes. This is true not only for the process of opening thermalism establishments and attracting initial investment, but also in daily operational routines. This paper presents a review of the legal framework for thermal activity across the Euro-region, highlighting legal differences between Spain and Portugal. Furthermore, this chapter shows how the legal framework is responsible for creating conditions that foster different levels of sector development. In doing so, this legal framework affects competition and hampers communication between institutions and consumers. The major consequence of this is to hinder internationalization of thermalism. The authors demonstrate the importance of strategically aligning existing thermal laws across the Euro-region to promote sustainable industry growth; a key concern given the industry's reliance on natural resources (hot springs and natural mineral water). Furthermore, by doing so, policy-makers could help foster a more favourable environment for developing and reinforcing thermalism in Galicia–North Portugal.

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1.1 Introduction

Thermalism constitutes a relevant factor for integral and sustainable development within the Galicia-Northern Portugal Euro-region, because it boosts other activities such as hospitality, restaurant business, transport or handicraft; because it helps increase audiences for cultural activities and equipment; because it discloses the local identity and consolidates the feeling of belonging; because it assesses the important natural and endogenous resources in a social and economical way, turning them into differentiating elements of the territory; and because it promotes the improvement of the quality of life of the population (not just through the treatment of chronic diseases but mainly by promoting their health, due to the facilitation and generalisation of the access to healthy holiday periods). This capability to interact with the multiple aspects of local development provides it with a large relational complexity which is reflected in the different regulations to which thermal activity is subject, i.e., it has to be addressed by multiple entities of the health area, tourism, geology and regional planning that often superpose their skills and performances. Thermal legislation is something professionals and entrepreneurs in the sector as well as potential investors must know in order to understand its scope and impact. At the same time, authorities must also be aware of the (positive and negative) effects the legal texts they produce have on the attractiveness of the business and the quality and safety of services offered.

This chapter promotes a reflection on the regulatory framework of thermal activity, highlighting the legislative differences between Galicia and Portugal, but also their "responsibility" for creating conditions which help enhancing the hydrotherapy development, when regulating competition and facilitating communication channels between supply and demand for this product (facilitating or hindering their internationalisation).

The legal context should not be a deterrent factor for investment or modernisation in the sector nor generate negative impacts on the possible attractiveness and profitability of investment in thermal activity; thus, the importance of strategic alignment of the laws regarding these two regions as a way to promote the sustainable growth of an industry based on differentiating endogenous resources is also noted.

This is a contribution to the creation of a more favourable environment for the development and affirmation of thermal activity in the Euro-region, resulting from common discussion and analysis of several experts and agents from the Euro-region by undertaking an exploratory study which needs to be deepened and validated by the sector as a whole.

1.2 Methodology

To carry out this study, it was followed the comparative method, since it allows identifying similarities and explaining differences between the legislation of diverse regions regulating the same phenomenon (in this case, thermal regulations). Its implementation in compliance with the law enables to identify related regulations in different countries in order to determine these similarities and differences, and to evaluate the development and the approximation of laws or even of legal institutions of these countries (Serrano 2006), what is often called Comparative Law.

Comparative Law has as its primary purpose the improvement of national law, highlighting its importance for identifying and formulating common principles governing the relations of civilised nations as well as for a mutual enrichment between legal rules (Serrano 2006) being also the object of study of this paper.

Firstly, current legislation was reviewed so, thermal activity in Galicia, Portugal, Spain and Europe (theoretical framework for the study) and to documentary research by analysing existing studies, which, although with different purposes, conducted comparative analysis of previously identified thermal legislation.

Comparative analysis of the secondary data collected allowed authors to set the context for the development of the study, which was validated by the interview data collection method, using the focused interview, which allows the analysis of the impact of legislation on the thermal activity/experience of the interviewee (the impact of the event experienced or witnessed by the interviewee) (Quivy and Van Campenhoudt 2008).

These interviews were individual and allowed the collection of written opinions issued by the representatives of thermal field associative entities at regional, national and international level (World Hydrothermal Organisation, Ibero-American Association of Hydrotherapy and Wellness, Portugal Spas Association, Spanish National Observatory of Hydrotherapy and Rural Development, Hot Springs Galicia Association and Galician Thalassotherapy Society).

Primary data were also collected by conducting focus groups which promoted structured discussion centred on the impact of Galician and Portuguese thermal legislation in specific areas of the thermalism universe (thermal development public policy strategies, training and human resources education in the thermal sector, and the thermal spa business activity), which allowed the progressive sharing and clarification of the points of view and ideas of the participants.

Several entities, such as the Tourism Agency of Galicia, the Commission for Coordination and Regional Development for Northern Portugal, the Universidade de Vigo (Campus Ourense) and Tras-os-Montes and Alto Douro University, were heard during the focus group that were organised.

This tool was selected to allow the production of information and knowledge in the analysis of themes or areas implying divergent opinions or involving complex issues which need to be explored in depth (QREN Observatory n.d).

After (primary and secondary) data treatment, conclusions and recommendations for a possible common legal framework within the Galicia-Northern Portugal Euroregion were drafted.

1.3 Theoretical References

1.3.1 European Thermal Legislation

For the European Union, thermalism is an eminently tourist activity that has been referenced in various strategic documents as one of the activities to be developed, but it lacks of a proper legal framework at European level.

The European Parliament resolution from the 29th of November, 2007 on "a renewed EU Tourism Policy: Towards a stronger partnership for European Tourism [2006/2129 (INI)]", which devotes a chapter to thermal tourism, recommends the use of European programs to promote thermal tourism and emphasises the relevance of cross-border cooperation in the definition of financing solutions for this tourism product.

This resolution was updated in 2011 with the publication of the European Parliament resolution from the 27th of September: "Europe, the world's No 1 tourist destination – a new political framework for tourism in Europe [2010/2206 (INI)]", which recognises that demographic developments in Europe will yield the continuous growth of health tourism, and in particular thermal tourism.

However and according to this latter text, it is necessary to adopt a specific EU policy which defines the recognition and utilisation of thermal facilities as well as the role of hot springs and thermal treatments under tourist systems of the various Member States (without forgetting and emphasising aspects like health, social security and health insurances.)

This same Parliament resolution explicitly recognises the existence of a wide variety of rules for thermal tourism at European level, recommending the introduction of a single legislative proposal on thermalism which provides a properly regulated organisational structure that encourages competitiveness.

1.3.2 Portuguese Thermal Legislation

The Portuguese legislation followed the evolution of thermal activity, and times of higher law-making coincided with the years of further thermal activity development.

Until 2004 the main regulations on thermal activity dated from 1928 (the year of the Spanish legislation, still in force partially) which explicitly linked thermalism to the health sector and the provision of health care.

The current law on Portuguese thermalism was published in 2004 (Legal Regime of Thermal Activity, Decree-Law No. 142/2004), updating the licensing procedures, organisation, operation and supervision of thermal facilities. For the first time, thermalism is no longer merely associated with the health sector to assert itself as a leisure and tourist activity.

This scheme is complemented -according to the Decree-Law No. 92/2010 (Article 31) and only in the case of thermal facilities exclusively dedicated to aesthetics, beauty and relaxation- by the regulations on Animation Tourism activities and Maritime Tourism Operators (Decree-Law No. 95/2013).

Regarding natural mineral water as a geological resource and raw materials for thermal activity, the Decree-Law No. 86/90 establishes the conditions under which rights to the respective prospection, exploration and exploitation can be acquired. This is supplemented by Decree-Law No. 90/90, which determines the need of prior submission of a hydrogeological study in order to define the boundaries of resource protection as a way to ensure their operating conditions, as well as its quality and availability.

The scope of protection of natural mineral water consists of three protection areas: the immediate area, the buffer zone and the extended zone. In each of them there are specific restrictions and prohibitions in terms of carrying out constructions and activities that, given their proximity to the resource, may harm its quality and flow.

In this context, spas must comply with the business plan that, in addition to identifying the perimeter protection, sets out how drillings and abductions should be done and used.

In particular, the definition of the mode of operation for each spa is embodied in the internal rules -being that the level of compliance with the requirements of hygiene and quality of care-, which must comply with the Good Practices Handbook for spas (Spas Association of Portugal – it establishes the guidelines for the elaboration of internal rules regarding thermal centres; standardises the use of definitions related to natural mineral waters, therapeutic indications and thermal techniques; establishes minimum quality requirements for thermal services; and identifies main thermal techniques.)

The delivery of the annual clinical report is also mandatory. That is a document to be prepared by the Clinical Director in accordance with the format approved by the Ministry of Health, which reflects the annual activity in its entire length (number of customers and their typology, generated revenue, given treatments, outcome indicators, analysis of seasonality ...).

1.3.3 Spanish Thermal Legislation

The legal framework of the thermal sector in Spain has singular characteristics due to the competences transferred by the central government to the regional ones. This uniqueness means that there is a basic law (the Statute on sources of mineral and medicinal waters – Decree 743/1928, from the 25th of April, 1928) which is

regulated by autonomous governments through complementary and modernised regulations, generating different regulatory frameworks from region to region.

Although dated from 1928, this Statute, partly in force until today, includes not only the thermal activity but it also deals with the property (and the rights and obligations thereunder), covering the bottled water industry.

Research and exploitation of natural mineral waters are regulated by Act 22/1973, from the 21st of July, which defines the right to reserve geological resources and the corresponding exploitation rights, establishing as a first step in the process the designation of "mineral water condition" regarding the source in question (fact that validates the respective therapeutic characteristics) and the Spanish exploitation of geological resources by foreign entities can only occur if the national interest regarding the exploitation of resources considered as strategic is safeguarded (Decree 1303/1986 from the 28th of June).

The condition of "mineral" entails the requirement of obtaining a prior declaration of public utility before starting to take profit from a natural mineral water source.

1.3.4 Galician Thermal Legislation

The Act on mineral waters, hot springs and spas facilities of the Autonomous Community of Galicia (Act 5/1995, from the 7th of June) is the basic thermal law in the region.

This standard specifies the regional and provincial guardianships accompanying the processes of installation and operation of thermal facilities, transposing the principles determined by national laws (Decree 743/1928 and Act 22/1973).

It decrees that the operation of mineral and medicinal water can only occur after obtaining a declaration of "mineral" or "thermal" condition of the water (meaning that this condition implies obtaining the declaration of public utility of water) (Decree 402/1996).

As well as the Portuguese legislation, the Galician one determines a perimeter of protection for the hydrogeological feature "natural mineral water" (also subdivided into three areas: maximum constraints area, medium constraints area and the minimal constraints area).

The use of a mineral and medicinal water (for therapeutic purposes) must obligatorily occur in thermal installations, and where emergency water is located and in accordance with the exploitation plan (4-year plan which presents the analysis of technical data related to the capture, analysis of operating costs, measures to prevent the risk of contamination and the monitoring and control of protection perimeter.)

Alternatively, it applies the requirements set by the regional authority for health services (Decree 12/2009, from the 8th of January), in particular, common technical and sanitary requirements and more specifically: architectural barriers and accessibility; facility security and fire protection; physical spaces; equipment, materials and tools; human resources; clinical documentation and management of health care waste.

The Galician Tourism Act (Act 7/2011 from the 27th of October) also applies to thermal activity and thermal facilities (specifically to tourist facilities complements), stating that spas and thalassotherapy centres are considered complementary tourist services companies and recognising the importance of these tourist establishments for the Galician region.

It defines, in particular, the figure of "thermal and thalasso hotels" limiting the use of these names (and its derivatives) to establishments that meet the legal requirements for thermal facilities or legal conditions required for the use of sea water, respectively.

1.3.5 Other Spanish Autonomic Thermal Regulations

As already mentioned, the autonomous regions of Spain are empowered to create their own legal frameworks based on general regulations enacted by the central government (the status regarding the exploitation of mineral and medicinal waters sources, 1928, and Act 22/1973 and subsequent amendments).

In general, the thermal regulations of the autonomous regions in Spain focus on two main areas:

1. The use and protection of the hydrogeological feature (which includes the procedures for obtaining the declaration of mineral condition and the declaration of public utility water, the procedures for the granting of exploration and the establishment of procedures for perimeter protection feature);
2. Exploitation of mineral and medicinal water and/or hot springs in thermal resorts.

Table 1.1 summarises the analysis regarding thermal regulations of the Spanish autonomous regions (except the Galician one, as summarised in the previous paragraph), which identifies the elements deemed as good practices (understood as legislative proposals without taken into account Galician or Portuguese regulations) to be considered in the proposal for basic requirements of a future common legal framework for the Euro-region, resulting from the comparative method between them and Galician and Portuguese legislations.

1.3.6 Other Thermal Regulations of Reference

As expected, in the European Union there are also different legal frameworks for thermal activity, many of which have been in force for decades. They have evolved at different speeds, trying to follow the evolution of the customer's profiles. Various upgrades have been important in this evolution process, such as the (non) consideration of the hydrotherapy as a medical activity and (non-) reimbursement of the health treatments and therapies by the social security systems and health insurances in each country.

Table 1.1 Legislation summary of Spanish autonomous regions

Autonomous region	Thermal regional legislation	Main topics to be outlined	Good practices
Andalusia	Decree 16/1994 Act 13/2011	It equates thermal facilities with health facilities (centres and non-hospitality facilities) Simultaneously, it considers thermal facilities as "activities affecting the tourism sector"	
Aragon	Decree 106/2004 Act 1/2013	It considers spas as health centres (care unit hydrology, where a hydrologist physician is responsible for the use of medicinal mineral and thermal waters for therapeutic and preventive purposes for health) The legal framework of hot springs is made in the tourism law which defines them as tourism resorts (consisting of housing units and a source of mineral and medicinal water declared public, used both for therapeutic or resting purposes, or to similar purposes) Still, the Act considers that tourism features of resorts are consistent with the features of health facilities, referring to the fulfilment of the medical-legal requirements related to the provision of hydrological services and balneotherapy	It gives the entrepreneur the choice of preferential treatment in relation to target customers
Cantabria	Act 2/1988 including the amendments introduced by Act 8/1990	It equates the thermal resorts with health facilities (regulated by regional specific legislation) and tourist, leisure or industrial complements have to follow the specific legislation It sets patients as target customers and the main mission is the treatment of specific diseases It sets the minimum composition of the staff of a health centre (Medical Director, Consultant Physician, Nursing Staff and Auxiliary Staff)	Formal assessment of medicinal and mineral and/or thermal waters (socio-economic importance, ability to reduce regional disparities and contribution to improve welfare and public health) Creation of a regional body (representative of the regional thermal system) with its own powers for the tourist promotion of sanatoriums
Castille La Mancha	Act 8-1990 regulated by Decree 4/1995	It determines that the mineral and thermal water is a public good The exploration and exploitation of the resource is subject to the prior completion of a hydrogeological study, the definition of conditions for protecting the aquifer, the setting of the protection perimeter and the drafting of an economic feasibility study It equates spas equipment with health facilities (hydrotherapy establishments providing health services and thermal treatments which may be complemented with industrial, hotel and tourist activities)	Identification of possible usages for each type of water Annual plan for using water resources and the establishment of thermal activity

Castille and León	Order EYE/1846/2007 Act 14/2010	It regulates the control of the different uses of mineral and thermal waters It deems thermal hotels as a hotel category (hotels that offer treatments using medicinal and mineral and/or thermal waters)	Monitoring of the water consumption and production of mineral and medicinal hydrogeological statistics
Catalonia	Decree 271/2001	It considers the services of balneotherapy and hydrotherapy as therapeutic services that require prior authorisation by the corresponding health services It states that the use of thermal, mineral and medicinal water resources should contribute to improve the quality of life for residents It makes reference to thermal health establishments identifying patients as target audiences, since this feature can only be exploited for therapeutic purposes The exploitation of thermal and mineral and medicinal water resources requires the submission of a hydrogeological study to define the conditions and rules for the protection of the aquifer (and therefore, inherent in perimeter protection) It creates the regional register of officially recognised medicinal and mineral and thermal waters (registration with the description, location, physical-chemical and/or radioactive, geological and topographical conditions of the terrain, access and therapeutic indications) It refers to thermal health equipment stores (the rules of creation, construction, adaptation and operation are therein stated) but considering the possibility of being associated with industrial, hotel and leisure and additional facilities (which are regulated by specific statutes for each type of facility) It states the minimum number of staff specialists, who must have the specialisation of hydrology medicine or another regarding therapeutic and health services, provided by a hospital- a consultant – medical director, nursing or auxiliary staff. Skills and health profile are defined in specific regulations It sets technical and sanitary requirements to be met by balneotherapy and hydrotherapy services (specifying the need to respond to an increasingly wide and diverse offer) It specifies the physical requirements for infrastructure and equipment It defines the profiles of medical, technical and auxiliary staff It considers the services of balneotherapy and hydrotherapy as therapeutic services which require prior authorization bythe corresponding health services	

(continued)

Table 1.1 (continued)

Autonomous region	Thermal regional legislation	Main topics to be outlined	Good practices
Extremadura	Act 6/1994	It states that the use of thermal, mineral and medicinal water resources should contribute to improve the quality of life for residents. It makes reference to thermal facilities and patients as target audiences, since this feature can only be exploited for therapeutic purposes. The exploitation of thermal and mineral and medicinal water resources requires the submission of a hydrogeological study to define the conditions and rules for the protection of the aquifer (and therefore, inherent in perimeter protection.) It creates the regional register of officially recognised medicinal and mineral and thermal waters (registration with the description, location, physical-chemical and/or radioactive, geological and topographical conditions of the terrain, access and therapeutic indications.) It refers to thermal health equipment stores (the rules of creation, construction, adaptation and operation are therein stated) but considering the possibility of being associated with industrial, hotel and leisure and additional facilities (which are regulated by specific statutes for each type of facility.) It states the minimum number of staff specialists, who must have the specialisation of hydrology medicine or another regarding therapeutic and health services, provided by a hospital- a consultant – medical director, nursing or auxiliary staff. Skills and health profile are defined in specific regulations	Creation of a regional body with competences for the promotion of tourist spas
La Rioja	Decree 15/2013	It applies the national law for exploration, exploitation and installation of spas facilities, being the Regional Ministry for Public Works, Local and Territorial Politics competent for the acceptance of the exploitation of natural mineral waters for therapeutic purposes. The Tourism Act includes the hotel-resort (those who are located in thermal resorts and offer medicinal, mineral or thermal water treatments) as a kind of accommodation	Formal definition of physical requirements and services that are to be applied to resort hotels

Murcia	Decree 55/1997	It establishes the main technical definitions related to this sector and to thalassotherapy (thermal baths, peloids, thalassotherapy establishments and facilities which use peloids for therapeutic purposes)	Specific legislation for thalassotherapy and use of peloids
	Decree 22/1991	It sets general safety requirements users of spas and thalassotherapy centres regarding to health conditions	Mandatory annual statistical report of completion of activities
		It determines the composition of resorts staff (medical hydrologists, one being the technical director and other resort staff – responsible for the development of therapeutic activities)	Formal definition of physical requirements and equipment of spas, thalassotherapy and use of peloids for therapeutic purposes
		Mandatory submission of the annual statistical report regarding the activities developed in the corresponding facilities	
		It determines the composition of the staff in thalassotherapy centres and peloids facilities (at least one physician responsible for the treatments)	
		Only establishments carrying out exclusively therapeutic activities are considered as health centres and have to comply with the health centres regulations	
		It defines the requirements to be met by establishments in the industry regarding infrastructures and equipment, as well as the hygiene standards and the use of water within their facilities	
		The existence of an internal regulation of user's rights and duties is mandatory	

Source: Author's

Due to the lack of policies or European guidance to homogenise the main features and requirements of the European spa industry, this study examines the national legal frameworks of neighbouring countries of the Iberian Peninsula (France and Italy), since they are the market competitors for the Euro-region, given these countries have a vast thermal tradition and they are widely divergent when monitoring target clients set by each of them.

France sets itself as an example to be compared with Portuguese reality, since the thermal legal framework of this country is unique and applicable to all the national territory. Whereas Italy presents itself as an example to be compared with the Spanish scenario, since each of the Italian regions is autonomous to determine its own legal framework regarding thermal activity.

Despite being out of the European continent, Tunisian legal framework and international best practices in terms of thalassotherapy were also analysed, given the proximity to the existing European reality in this context.

The main conclusions from the analysis of these legal frameworks are summarized in Table 1.2.

This analysis should not be understood as an exhaustive analysis of the legislation of the selected countries, but rather as an analysis of the context promoted by the respective regulatory framework.

1.4 Towards a Cross-Border Common Legal Framework

Once the theoretical framework has been constructed, it is necessary to apply the comparative method:

- To the thermal legislation in the Euro-region identifying a set of common points regarding the main legal procedures to which this activity is subject;
- Between this and the remaining thermal laws which are part of this theoretical framework.

As regards the comparative analysis of the legislation in force within the Euro-region, the parallelism found throughout the respective development shall be contextualised, showing both in Portugal and in Spain the year 1928 is a landmark in terms of legislative output which remained in force over several decades, corresponding to the initial recognition of the importance of the economic sector of thermal activity.

In both legislations, natural mineral water is considered as a geological resource of relevant economic value, and should be controlled by the entities responsible for the remaining geological resources (the Directorate General for Energy and Geology, in Portugal, and the Energy and Mines Departments, in Galicia and in Spain).

Both legal frameworks ensure the protection of the natural values of natural mineral water by setting perimeters of protection that prevent or limit the continuation of activities near the aquifers, which could jeopardise their flow or their bacteriological purity or change their chemical composition.

Table 1.2 Summary of French, Italian and Tunisian legal frameworks

Country	Justification	Main thermal international legislation	Key provisions
France	European reference for thermalism	Health public code	Strong dependence on the national system of health and social security
	Market competitor (and proximity) of the Galicia-Northern Portugal Euro-region	Decree from the 19th of June, 2000, as an amendment of Decree from the 14th of October, 1937.	It determines a unique protection which corresponds to the Ministry of Health
	Existence of a single Act nationwide, which may be compared with Portuguese legislation in terms of contribution to the creation of legislation regarding the thermal sector	Act No. 2004-806, from the 9th of August, 2004.	In its latest update, it promotes the simplification of administrative procedures; harmonisation of regulations on the use of natural mineral waters (treatment, bottling or public sources)
		Decree from the 27th of February, 2007	It requires proof that water meets requirements for natural mineral waters either by complying with the principles of the HACCP as a guarantee for quality of the provided services and produced products or by implementing periodic self-control measures on natural mineral waters (additional to the regular ones)
		Decree from the 5th of March, 2007	It authorises the operation of mineral and medicinal waters according to the favourable evaluation of the technical dossier (composed of hydrogeological studies providing scientific and technical information on the waters and surroundings of the emergency facilities, it states protective measures for the collection and distribution and demonstrate suitability of the materials used to ensure the protection and maintenance of the water properties)
			The submission of water clinical trials to the National Academy of Medicine is compulsory.
			It requires the official control of natural mineral waters used in sanatoriums (ensuring quality and safe use)

Table 1.2 (continued)

Country	Justification	Main thermal international legislation	Key provisions
Italy	Market competitor of the Galicia-Northern Portugal Euro-region	Decree No. 1924, from the 28th of September, 1919	It regulates the provision of services to ensure thermal maintaining and recovery of the state of physical and mental well-being. It also defines the rules for the promotion and enhancement of hydrothermal heritage, including the development of natural, environmental and cultural resources of thermal territories. These services are provided under the national health system or work insurances (in case of neuro-motor rehabilitation, functional or cardiac rehabilitation)
	Legislative autonomy at regional level regarding thermalism	Act No. 323/00 (national legislation)	It sets thermal companies (those that consist of one or several sanatorium) and thermal areas (corresponding to the territories of the municipalities where there are one or more concessions for exploitation of natural mineral waters)
		Act No. 323, from the 24th of October, 2000	It recognises the importance of hydrotherapy for tourism by introducing a specific provision the Italian National Agency for Tourism includes in its plans and programmes, as well as appropriate initiatives to promote Italian Hydrotherapy abroad as part of the overall tourist offer in Italy
		Decree No. 339, from the 4th of August, 1999	It imposes the exclusiveness of the terms: spa, spa water, thermal, hydrothermal, hydro mineral mud, and thermal spa, to refer to cases of recognised therapeutic efficacy restricting its use to the services provided by spas
		Decree-Law No. 105, from the 25th of January, 1992	It requires proof of technical and financial ability of the applicant for resource exploitation
		Decree-Law No. 176, from the 8th of October, 2011	The most representative associations of the sector should be heard when awarding licenses and concessions
		Decree No. 54212, from November, 1992	It requires the existence of a medical director (medical specialist in hydrology, thermal medicine, hydrotherapy, physiotherapy, health or other field related to therapeutic vocations of natural mineral waters of the thermal resort where he/she works), who is to be responsible for the management and coordination of activities related to thermal treatments and staff
		We also analysed legislation from the following Italian regions: Sardinia, Campania, Marche, Tuscany and Veneto	It regulates cosmetic production using natural mineral water
			It is compulsory for entities that receive contributions by thermal companies (municipalities and regions) to invest these revenues in implementing measures and initiatives to safeguard resources or tourism promotion in thermal sector.
			The specific rules for the use of hydrothermal and geothermal resources are regional.
			Through the Regional Thermal Water Plan, regions have to proceed to the identification of aquifers, their bacteriological, chemical and physic-chemical characteristics, the location of facilities for the use of mineral and thermal waters and the allocation of the respective therapeutic vocations
			There is a regional body providing technical assistance to entities in the process of provision of natural mineral water and licensing of sanatorium. This body acts as a regulator of these processes
			Municipalities have competencies and duties in management of hydrological resources within their territory

Tunisia	International Thalassotherapy reference Market competitor for the Galicia-Northern Portugal Euro-region	Water code	It brings together in a single text the main rules and requirements related to use and exploitation of water (regardless of classification) It includes a glossary that standardises the meanings of the terms used in legislation It creates the *Office du Thermalisme* (body currently under the purview of the Ministry of Tourism for monitoring the development of the sector and which is competent to manage thermal establishments; it could be delegated to entities/persons judged as capable)
		Decree No. 2006-3174	It entrusts the supervision of thalassotherapy centres as providers of therapeutic services to the Ministry of Health and to the Department of Tourism, the supervision of accommodation and complementary leisure activities It defines thalassotherapy, the conditions for implementing a thalassotherapy centre and the types of services which may be offered It requires the previous elaboration of an ecological study (local deployment, marine and terrestrial flora, existing buildings and weather conditions) It regulates the collection, adduction and conservation of sea water to be used in thalassotherapy centres It provides sanitary hygiene criteria with which thalassotherapy centres must comply (including type, minimum dimensions and materials for facilities and equipment) It defines the staff composition of thalassotherapy centres (centre director: preferably a doctor; technical director: who will be a doctor in case the centre's director is not a doctor; physiotherapist, senior technician in hydrotherapy, thermalism and thalassotherapy; nurse, lifeguard and hygienist)

Source: Author's

In both areas the respective health authorities are in charge of defining the technical requirements and hygienic-sanitary conditions for the opening of sanatoriums.

The Clinical Director, in the case of Portugal, and the Medical Director, in the Galician case, take responsibility for supervising and coordinating medical spas.

Both legislations also share the requirements for preparation and submission of key documents: operating plan/recovery plan, rules and the report of activities/clinical report.

They recognise the importance of thermalism as a tourist activity, establishing shared controls (tourism, health and geology and mining) for thermal activity.

As regards the identified differences, it was concluded that, they are mainly due to the different territorial levels and the inherent regional autonomy; however, there are no significant differences.

In Portugal, the State is the owner of hydrothermal resources (natural mineral water is a public good whose exploitation could be awarded to private agents.)

In Galicia, it is not possible to exploit a natural mineral water in a thermal and/or industrial establishment which is not located within the emergency area of such waters.

In Portugal, the doctor responsible for the thermal establishment must be a doctor specialised in hydrology, being this an essential condition for the opening and operation of a thermal establishment. In Galicia, this specialisation is not mandatory, although it is a preferred condition.

In Portugal, only spas exclusively dedicated to aesthetics, beauty and relaxation are considered tourist enterprises. On the other hand, in Galicia all thermal resorts are considered as tourist firms.

In Galicia, plans associated with natural mineral water exploration (as a hydrogeological feature) must be updated every four years; there is no such requirement in Portugal.

It was also possible to conclude that in some specific cases, differences between Galician and Portuguese thermal legislation are added values to share for a future joint or common legal framework as summarised in Table 1.3.

All previous analysis led to the identification of the requirements to be considered in developing a common legal framework (also valid for a possible EU policy for thermal services); as an example, a chapter should deal with hydrogeological resources and contain:

- A general definition of technical and administrative procedures – on research, investigation and exploitation of natural mineral waters and sea waters – in order to continue using them in spas and thalassotherapy centres;
- ways of exploration and corresponding requirements;
- definition of certain figures and inherent requirements: perimeter protection, business plan, hydrogeological study;
- recommendation of certain figures and inherent requirements: technical director, bacteriological purity indicators of the natural mineral water.

Table 1.3 Comparison between Galician and Portuguese legislation

Legal provisions	Northern Portugal	Galicia
Exploration, research and exploitation concession	Definition of procedures for each specific case, being the hydrogeological resource always a public good	Compulsory exploitation of natural mineral water within a maximum period of 5 years after the declaration of public utility under penalty of losing this right
General contents	Definition of key concepts and terms A technical director is needed Territorial delineation of the spa (which includes the right for the thermal centre to exclusively use the spa terminology, thermal facilities, spa and derivatives)	Single administrative window for thermal resorts
Operation	Compulsory internal regulation Compulsory liability insurance Existence of a manual of good practices in the sector	Formal establishment of architectural and functional requirements for thermal facilities Formal identification of occupational categories presents in a thermal spa
Additional		Legal definition of thermal hotel and thalasso-hotel

Source: Author's

1.5 Conclusions

The main conclusion is the possible suitability of a common legal framework for the Euro-region, which should meet the following objectives:

- provide credibility to the industry and to the supply sector regarding the target audience;
- simplify communication with current and potential customers;
- reaffirm the Euro-region as a quality spa destination;
- increase the capacity of internationalisation of the Euro-regional spa industry;
- homogenise the thermal technical language used in the Euro-region;

The definition of a cross-border common framework would be a pioneer project in the European Union, but this exercise has also highlighted the need to complete a discussion exercise about the approximation of development criteria and requirements for the thermal activity within the 27 countries.

The existence of a common legal framework would help to deepen the concept of euro-citizenship, to reduce barriers and costs for new investors for entering the market (thanks to the simplification and standardisation of investment requirements), and to ensure similar levels of quality for European customers.

This common framework would homogenise the basic criteria for the development of spa and thalassotherapy activities both qualitatively and administratively.

The final version of a legal document to guide thermal activity in the Euro-region should result from a joint debate and collaborative work between different sectorial Euro-regional actors, in order to obtain a broad understanding regarding the validation of requirements which must contain.

In applying comparative law, it is concluded that a common legal framework for the Euro-region can be based on common elements that Portuguese and Galician legislation have, which may be deepened and improved according to the monitoring of results and depending on the evolution of the industry.

We propose, such as some of the international cases studied in this chapter, that this work of improving and updating the common legal framework should be coordinated by a Euro-regional monitoring body, understood as a consultant (non-binding) entity.

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Chapter 2
Health and Wellness Tourism: A Strategic Plan for Tourism and Thermalism Valorization of São Pedro do Sul

Carlos Costa, Joana Quintela, and José Mendes

Abstract Wellness tourism has become an emerging market segment directed not only for those who pursue solely thermal treatments but also for those seeking illness prevention, physical improvement and spiritual balance or even for those eager of *cultural and relaxation programs*. In this sense, wellness tourism has become more complex and creative, demanding high quality equipments and infrastructures, providing a wide range of products and services related not only with the diversity of spa treatments but also with complementary recreational activities regarding the connection to nature and to cultural patrimony as well as to other regional resources, creating effective links to the territory and becoming a significant force that will shape the regional development, by creating a positive pressure on local economic bases with spillover effects on the territory. This research presents a case-study based on the creation of a strategic plan for tourism and thermalism valorization of São Pedro do Sul, the largest thermal health complex in Portugal. It relies on three main aspects – products, space promotion and governance – and it will unveil how classic spa tourism may evolve towards modern structures by capturing emerging and modern tourism demands.

2.1 Introduction

The beginning of the twenty-first century has been characterized by massive changes that are determining the future of the tourism sector (Costa 2006).

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According with the research of Ramos and Costa (2010), the sensitivity of the spa offer in its entirely was highlighted as well as its position in the face of an emerging paradigm – that of the assertion of inland destinations. Health and wellness is nowadays one of the most recognized tourism products, as one of the most important economic and social phenomenon of our days (Antunes et al. 2010).

Tourism based on health and wellness spa facilities is not one-dimensional, passive or unsophisticated: it contains within itself multiple ideas of landscape and building appreciation, environmental and touristic sustainability, health improvement, self-involvement, active learning, facility-client relationships and the importance of the involvement of host communities that transcend the passive tourist 'gaze' experience (Smith and Kelly 2006).

Thermal centres constitute development poles in a local and regional scale, generating a spillover effect in the economic and social tissue, contributing also for the enrichment of the quality of life of the local population as well as for regional asymmetries (Antunes 2012) as well as its position in the face of an emerging paradigm – that of the assertion of inland destinations (Ramos and Costa 2010).

In this sense, each health and wellness centre is inductor of touristic development according with its high strategic potential, so each health and wellness unit must be an anchor project and ought to be insert in a complex with different kind of activities that may increase the destination attractiveness and the customer loyalty (Sarmento and Portela 2010).

2.1.1 Thermalism and Wellness Tourism: Origins and Evolution

Reflecting upon thermalism within the sphere of tourism is closely associated to an intellectual activity connected to multiple historical, political and social fields. These are generally characterized by being permanently linked to activities based on leisure, well-being and evasion (Ramos 2008). Thermal tourism was defined by IOUTO (International Union of Official Travel Organizations) as "the provision of health facilities utilizing the natural resources of the country, in particularly mineral water and climate" (IUOTO 1973).

The history of hot springs and their use as thermal spas has worldwide origins and dates back to the earliest civilizations (Erfurt-Cooper 2009). The very earliest forms of tourism were directly aimed at increased health and well-being. The greco-roman tradition makes of water a reference to health and wellness. The first recorded instance of medical tourism dates back more than 2,000 years when visitors, perhaps the first pilgrims, travelled from around the Mediterranean to Epidaurus in the Peloponnese, said to be the birthplace and sanctuary of the god of healing, Asklepios, the son of Apollo.

In roman times taking the waters was popular and spas date back more than 2,000 years, and health cures linked to water were common to many regions. The numerous spas and sacred sites that remain in many parts of Europe and elsewhere, in some places represented the effective start of local tourism, as people travelled to gain

physical benefits. From then onwards particular therapeutic places and landscapes, from springs and mountains to temples and cathedrals, have played significant roles in most cultures and regions. Health tourism, in a relatively gentle form, has a long and unbroken history (Connel 2011). In Middle Ages, thermalism was forbidden because of the epidemic diseases and religious rigor. This tendency appeared once again in the XIX, revitalized and with strength and glamour and even associated to other kind of activities that were capable of keep the tourist such as casinos, theaters, opera rooms frequented by a powerful aristocracy. At that time thermal spaces associate cure by mineral waters to touristic comfort and leisure.

Nowadays, health and wellness tourism is a rapidly growing sector of today's thriving tourism industry and it has increased its activity worldwide. The growth of tourism directed not only for those who pursue solely thermal treatments but also for those seeking illness prevention, physical improvement and spiritual balance or even for those eager of *cultural and relaxation programs.* The main demand factors that influence the development of wellness tourism and wellness services are concerned with the ageing of the European population, an increasing desire to live longer and better, growing awareness of world health threats, and an increase search for new and different leisure experiences (Smith and Puzckó 2009). Health travel segment fast growth is also driven by: shifts in demographic structures as well as lifestyles, the need for stress reduction among the working population, a shift in the medical paradigm towards prevention and alternative practices, increased interaction between the shifts from mass tourism towards customized forms of travel (Laesser 2011).

Portugal has a great tradition of thermalism and actually these establishments in their process of adaptation to demand have acquired a broader approach; customers come to the thermal baths, either to treat or prevent ailments or to take a break and spend a few days off enjoying a real health holiday (Del Río et al. 2014). Nowadays, health and wellness tourism is considered by National Tourist Strategic Plan or PENT (2006–2015) as one of the most important markets for the future development of tourism in the country (PENT 2006), and recognizing the increase of the number of people interested in having leisure times with quality, becomes evident and necessary give special attention this touristic product, as an answer to the needs and wishes of consumers, as well as the fulfillment of their satisfaction levels (Quintela et al. 2011).

Academically, medical and health tourism have included emerged as one of the fastest growing areas of research interest in both tourism and health studies (Hall 2011).

2.2 The Strategic Plan for Tourism and Thermalism Valorization of São Pedro do Sul: A Case-Study

During 2014 the "Strategic Plan for Tourism and Thermalism valorization of São Pedro do Sul" was designed. This region has registered a growth of 12.3 % in the number of guests between 2005 and 2012, representing 1/3 of the total volume

of income of classical tourism. Although, in the point of view of the economic development of the region, SPS is still far from being developed , because there are lodgment units, but we still can't gather to tourism sector the landscape, culture, patrimony and wellness dimensions.

Relying on three main aspects, products, space promotion and governance, the project intended to study, in a first moment, the relation between offer and demand in SPS. This market is stronger in what concerns to classical thermalists and not to wellness users, but one of the goals of this project is to promote, develop and structure the touristic offer. In the first line of development is health and wellness tourism, on the second line is cultural and patrimonial tourism and in the third line is tourism of nature. Each one of these components will be analyzed in the next pages.

2.2.1 The Region of São Pedro do Sul (Dão-Lafões)

São Pedro do Sul (SPS) is located in a Centre Northern region of Portugal called Dão-Lafões, situated in the edges of the Vouga's River and it is well-known for its thermal centre, one of the biggest in the country.

The history of the Thermal Centre of SPS is old in time and remains to the year of 1884. Located, the historical registers of this thermal centre are lost in time. However, the construction of the thermal complex bases, is attributed to the Romans, which is proved by the existence of important ruins and archaeological remains (Gustavo 2009). From the roman period we can identify some parts and elements of the ancient *balneum*, such as ionic columns, capitals, Latin inscriptions, interior swimming-pools and other spaces.

Nowadays, this thermal centre is composed by two complementary thermal buildings for the health segment called "D. Afonso Henriques" and other for the wellness segment called "Rainha D.ª Amélia". The first building has the name of the first king of Portugal that in the year of 1169 cured a problem in his leg after falling from his horse in the Badajoz's battle by using these waters. This building has a great cultural, architectonical and archeological value and been classified has National Monument in 1938.

This thermal centre is a leader of the Health and Wellness market in Portugal and it is open during the whole year and it is specialized in the cure of respiratory and rheumatological diseases, according with the mineralogical properties of the waters (classified as minero-medical and hyperthermal waters with the temperature of 68.7 °C) and also offers a range of spa treatments. Because of its tradition but also because of its popularity among the visitants, the SPS Thermal Centre occupies a singular position in the history of thermalism and shows great possibilities for sector and regional development of in the future.

The Project unveil that the numbers of regional and local touristic development between 2005 and 2012 demonstrate an evolution of the annual growth tax relatively to the number of guests in hotels, showing there has s been a decrease in the of 0.9 % in the region, but specifically SPS showed and increasing of 12.3 % in

2012. This tendency is also verified in the evolution number of nights in the regional hotel establishments during the same period, showing a decrease of 1.1 % in Dão-Lafões region and a growth of 27.6 % in SPS in 2012. SPS also shows in the same year a positive evolution in the average stay in hotel establishments with a growth of 4.9 %, as well as an increase of 24.3 % in the rate of bed occupancy in hotel establishments Specifically, in what respects to thermalism the actual tendency in Portugal shows a decrease of 8.1 % in the number of the users of classical thermalism between 2005 and 2013, but SPS shows an inverse tendency, registering a growth of 30 %. In terms of leisure and wellness visitants, Portugal has registered a great evolution of 14.0 % but SPS registered only an increase of 3.4 % in the number of this kind of visitants.

In what concerns to financial return or income the tendency in both wellness tourism and classical tourism is the same. There is a decrease of 5.6 % in the classical thermalism income between 2005 and 2013, but in the same period and in the same segment SPS shows an income of 31.3 % Specifically in the last 2 years of 2012 and 2013, there's been an increase of the income of the wellness and leisure segment of 5.4 % in Portugal and a growth in SPS of 7.7 %.

2.2.2 *The Touristic Offer*

In the region of Dão-Lafões there are several touristic resources that can become anchor touristic resources of different kinds, like the natural patrimony with S. Macário mountain, Arada and Gralheira, Vouga, Paiva, Sul and Teixeira Rivers, the lagoon of Ribeiradio dam and a variety of pedestrian trails.

The region is also rich for its cultural patrimony that we can divide in monumental patrimony (the *balneum* ruins, monasteries, chapels and churches, typical villages of Fujaco); the artistic patrimony (rural Museum of Carvalhais) and the ethnographic patrimony (popular dances and local handicraft). It also has solid equipments (thermal centres, bioparque de Carvalhais and touristic and lodging services). Although, restaurants have a limited offer, as well as the nocturne animation and touristic animation. For that reason is necessary to encourage the modernization of the companies that act in the sector of health and wellness tourism, through the innovation of products that enlarge the touristic offer and satisfy, simultaneously, strategic development goals and promote the destination nationally and internationally (Ramos and Santos 2008). In this sense is urgent to organize and structure the touristic offer for thermal centres spread all over the national territory.

2.2.3 *The Touristic Potential Demand*

The qualitative analysis intended to characterize the local tourist profile and identify the potential touristic demand. Customer oriented product development has become increasingly necessary for gaining a competitive advantage in the tourism industry.

In order to develop customer oriented products, companies need to recognize customers whose needs they can fulfill based on their own resources.

Customer segmentation divides customers or potential touristic demand into homogenous groups which differ from each other based on some given factor. It is possible to create well targeted products and services by using detailed customer and segment information (Konu 2010).

2.3 Methodology: Sample and Data Collection

According to the established goals of the strategic plan for tourism and thermalism valorization of São Pedro do Sul region the project intended to study, in a first moment, the relation between offer and demand in SPS.

A questionnaire managed by Idtour-unique solutions (a spin-off company that has emerged under the umbrella of the University of Aveiro), was designed to characterize the demand in what concerns to its demographic characteristics, the motivation for visiting the region, the fidelization levels and also the preferences for the different aspects of the region. The questionnaire was applied to the visitants of the region of São Pedro do Sul, collecting a total of 262 valid surveys.

2.3.1 Results and Analysis

According with the results of the research for 77.5 % of the inquired is not the first time that visits this region. In what concerns to loyalty to the destination we found that most of the sample shows a fidelization between 5 and 10 years (26.6 %) and between 2 and 4 years (23.2 %) and only 1.0 % of the sample shows a fidelization with less than 1 year.

In what concerns to the image, characteristics and resources of the region, most of the visitants associate it to nature and landscape (42.7 %) followed by thermal and treatments (23.7 %). Almost in the same proportion, the empiric research showed that the principal motivation to visit this region is related with thermal treatments (72.5 %), rest (58.4 %), health (40.1 %), nature (30.5 %) and wellness / well-being (27.9 %).

Referring to lodgment, hotels are the main preference for the visitants of the region representing 62.3 %. Most of the visitants stay for medium/long stays, around 2 weeks, representing 48.9 % of the total.

Concerning the global image destination, visitants classified it in a very positive way. 57.3 % of visitants has classified it as *excellent* and 27.1 % as *good*.

The visitants also evaluate a several the positive aspects of the region that goes from landscape (45.4 %), to hospitality (22.9 %), tranquillity (21.8 %), thermal centre and treatments (17.9 %), lodging (12.2 %), gastronomy (11.1 %) and urban space (10.3 %).

Region evaluation in its negative aspects, such as environmental hygiene (15.3 %), river pollution (9.9 %), roads and accessibilities (8.8 %), lack of cultural and nocturne animation (7.6 %), services (attendance) (6.1 %), price of the treatments (4.6 %), lack of signalization (2.3 %) and touristic information (1.5 %).

The most used services in the SPS complex are thermal treatments (79.5 %), medical consults (64.7 %) and thermal baths (38.1 %), massages (26.0 %), animation programs (24.7 %).

The main reasons for choose SPS is related with the quality of thermal waters (41.2 %), the recommendation from friends and relatives (29.8 %), medical suggestion (28.6 %) against 7.3 % for medical prescription. Exactly the same percentage of visitants comes only for curiosity.

The demographic data showed that most of the SPS visitors' show a balance between the affluence of man (45.0 %) and women (50.8 %), most of them in a senior with ages has between 66 and 85 years old (48.9 %), and 54.2 % are retired from their professional life, they have superior education (43.5 %) and a monthly income between 1,000 and 2,000 Euros (32.4 %). The senior market is stronger in what concerns to classical thermalists and not to wellness users, but one of the goals of this project is to promote, develop and structure the touristic offer. In the first line of development is health and wellness tourism, on the second line is cultural and patrimonial tourism and in the third line is tourism of nature.

Most of the SPS visitants come from Portugal (92.4 %), just 6.1 % comes from foreign countries. The main national regions are Lisbon (37.2 %), Central region (33.0 %) and Northern region (22.0 %). In total of the sample, only 13.4 % had a kind of financial support, mostly from the national health system (57.1 %).

This is another important question to look at is the governmental co-participation of these treatments. This is an area that can be helpful to reflect in the near future because payments through National Health Service in Portugal have been lower and that could influence the evolution and development of thermalism, but this is not happening. Demand still visits this destination, use tourism services having long stays in hotels and pay directly and independently their thermal treatments.

2.4 The Development Strategy

To create a development strategy is important to know the region in its multiples aspects, designing a SWOT analysis (Table 2.1).

In this development strategy we focus on strategic resources, defining objective contents, creative and innovative actions to achieve orientation to the markets, the connection with the communication channels and with distribution agents. The final goals we intend to achieve with these three directions – products, promotion and governance – is to increase the number of visitants in 5.0 %, to increase the income in 7.5 %, and get lower the seasonality phenomenon in 3.0 % less.

To finally create high impact on markets, increase the efficiency and the efficacy of the promotion, to increase the notoriety, stimulate the business concretization.

Table 2.1 SWOT analysis for SPS (Dão-Lafões) region

Strengths	**Weaknesses**
Is a market leader in thermalism segment in Portugal;	Image associated to health segment;
Quality and characteristics of thermal waters;	Touristic animation (including nocturne);
Great and solid attendance capacity;	Weak involvement, collaboration and connection to health sector;
Diversity and complementarity of the existing offer (2 buildings for classical thermalism and for wellness treatments);	Eccentric location to circuits and traditional destinations of the national tourism;
Diverse and quality of the lodgment offer;	Decreasing of the number of visitants in SPS Thermal Centre;
The historical richness, cultural and patrimonial, with strong connections with rural environment;	Distance of the main national airports;
Environmental quality and greatness of natural territory;	Financial capacity to develop more and better promotion actions;
Good relation price-quality;	Lack of an annual calendar of events (animation);
Safe region, a hospitable and relaxing environment.	Territorial signalization of the territory and the main touristic resources.
Opportunities	**Threats**
Growth of the wellbeing / wellness market;	Massified development of SPAs (associated to hotels);
Incentive systems and financial support (until 2020);	Increasing of medical tourism in other regions of Portugal;
Availability of evolvement of the private agents;	Increasing of competitiveness of other destinations, mainly international;
Oldness of national and European population;	The global economic and financial crisis;
Adoption of preventive health actions;	Austerity measures applied in Portugal (reduction of the income);
Growth of international tourism (1.8 thousand millions of tourists in 2030);	Decreasing of the duration of the stay and of the average of expenses of the visitants of the region;
Proximity of Spanish market;	Visitants more dependent from technologies;
Increasing of the senior market segment.	Introduction and payment of high-way taxes.

2.4.1 Action Plan: The Anchor Projects

The action plan is essential to define a lot of different anchor projects that will improve the development of the region and also promote the development of health and wellness tourism as a composed product.

We define three main segments of development. For which one of these three segments, we define a lot of different actions, creating an action plan for the development of tourism in SPS region there are different strategic actions to apply in the

short and in the long term, created with anchor projects, promoting simultaneously the health sector and the tourism sector as follows:

- **Products** – Concerning to products, we intend to valorize the existing patrimony, to improve the territorial ordinance: natural, rural and urban territory, improve the attraction of new projects and the diversity of the offer and invest in offer qualification.
- **Promotion** – Related to promotion, we intend to consolidate the national market, increase the intervention in health sector, reinforce the investments on promotion tourism sector, increase promotion actions. Promote the thermal complex in tourism sector (touristic operators and travel agents and regional tourism organizations), innovative actions in high potential markets, participate in promotional events nationally and internationally, create a branding communication original and strong, create a regional website with technical characteristics and promotions, thermal promotion specifically in health sector (doctors, health centres, hospitals and associations).
- **Governance** – In what concerns to Governance, we pretend to increase the involvement of the regional partners and monitorize the touristic activity. Polarization of the three main vectors: Thermal Centre, Nature and Culture, Define anchor projects (Romain Thermal Ruins, Vouga's River), involvement reinforce the ordinance and organization of the touristic territory. Promote the creation and the implementation of development strategies, the population involvement and of economic agents, involvement of scientific community (Health and Tourism), design an instrument of monitorization and observation (Observatory).

2.5 Conclusions

The future of the tourism industry will emerge as a result of the evolution that is already taking place on the consumer's side, as customers are becoming more knowledgeable, informed, sophisticated and demanding. This requires new innovative products and alters both the operational and strategic management of tourism organizations as well as the structure of tourism itself.

It is evident that change is inevitable and it is influenced by a number of forces and factors in the external environment of tourism as well as the global competition emerging. With low barriers to entry, thousands of innovative businesses appear daily to capture market share, effectively enhancing the consumer bargaining power. Innovative tourism organizations and destinations should explore consumer trends and design suitable offerings and experiences to entice consumers.

They should modernize their management, practices and processes and develop links with compatible organizations to take advantage of the emerging opportunities. Consumer transformation is one of the most critical factors in this process. Tourism demand is changing dramatically in terms of volume, characteristics,

location, preferences and consumer behavior. It is demonstrated that, in accordance with the 2020 WTO Tourism Forecasts, the world tourism market will more than double in two decades, reaching 1.6 billion consumers by 2020. Perhaps most importantly, transformation of tourism demand and consumer behavior will gradually place customers in the driving seat of the industry and will require customer-centric strategies where consumers are empowered to build their experiences. (Buhalis and Costa 2006).

Actually, personal health influences all patterns of consumer behavior – including travel. However, and to put those claims into perspective, health travel is (still) a niche and special interest market, but is significantly and increasingly contributing to the economy within a number of countries and is thus enjoying increasing research interest from both scholars and the tourism industry (Laesser 2011).

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Chapter 3
Networks in the Health and Welfare Sector: A Study Beyond Borders – Portugal/Spain

Fernanda Nogueira and Ana Branca Soeiro de Carvalho

Abstract In a context of organizational change franchising appears as a new systemic trend of enterprise context. In the provision of health and Well-being services there has been, in last the 10 years, a huge increase in demand of this type of organizational form, to solve issues of employment and creation of self-employment. Two of the organizational problems that modify the behavior of these networks are opportunism (free-riding) and adverse election (hold-up). It is the necessary, therefore, to structure and to define mechanisms of control in the development of the networks and the proper units of franchising, so that the companies do not disappear, jeopardizing a whole system of creating a brand, a image, an investment and know-how. This article intends to demonstrate that the bigger the problems of hold-up and free-riding in franchising systems, the greater the probability of the franchisor to supply territorial exclusiveness to the franchisees. It seems, therefore, that the territorial exclusiveness is the guarantee, for a franchisor, that the return on fixed investments of franchisee will not be later considered out of control or may lead to a lack of business sustainability.

3.1 Introduction

It is in the different ways of development and adaptation to the environment that the rupture of paradigm of today's times lies. The substantial and permanent economic and organizational changes we are living with, characteristics for the transition between the industrial phase and of information (Yin and Zajac 2004, pp. 365–383), are an example. Both academic theory and organizational development demonstrate a reduction in scale enterprises, whose hierarchies are being replaced by networks, which indicates how radical changes in the environment and the necessary impact on attempts to adapt organizations in terms of their structure have been (Nogueira 2014). The franchising system appears as solution that emerges as a premise for a new type

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of organization. Societies more and more change through information and less and less through the substance, what has consequently been causing the emergency of network infrastructures and the fall of the technological structures on-line. This type of structure has become a global phenomenon, due to the particular features that mark contemporary society. Within what we call the creation of the network relationship, some of the more recurrent themes in the literature on franchising are: the decision to create a network, franchising as an organizational form, the resources that the franchising system brings, the franchise emotivations to elect this system, how decisions of franchisors to supply franchisees with exclusive territories and how these influences in the operating results of franchising systems are taken. So far, only Azoulay and Shane (2001) have studied the effect of a strictly contractual option on the operation of networks. These researchers found that the new franchise chains, whenever they provide unique regions, they have a higher probability of survival over time in comparison to the chains/networks that do not do it.

More and more companies of Health and Well Being seek in franchising a swift way to enter the market. The reason may lie, among others, in the fact that they use more a networking work struture than a hierarchical one. The interest and innovation of this work are based, thus, in the fact that, for the first time, a comparison is systemized between a set of mechanisms designed to reduce the problems of free-riding and hold up in the sector of health and well-being. For that the hypotheses on the adoption of the territorial exclusiveness were defined, there was a description of the data, the used methodology and the most relevant results. Finally, we present the conclusions.

3.2 Review of Literature

3.2.1 From Organizational Network to Factors to Success

The net concept estimates that the franchisor can expand his net by establishments/units or through franchisee units. In other words, in terms of organization can opt for a system where there is a hierarchy or a hybrid system between the hierarchy and the market (franchising).

Ebers in 1999 and Cropper et al. in 2010 they register the emergency of the organizations in net as a clear and promising solution to the vanities presented for the integrations hierarchic or of market. Thus, the economic function of a network is better understood as a moral relationship of trust, social capital as a "group of individual agents who share informal norms or values than those necessary to ordinary commercial transactions" (Fukuyama 2000, p. 293). However, "companies cannot organize their core functions in markets with all competing with everyone" because they would generate higher transaction costs (Fukuyama 2000, p. 291). Coordinate strong degree of decentralization in organizations then depends networking, "a form of spontaneous order that emerges as a result of the interactions of decentralized actors, without having been created by any formal authority" (Fukuyama 2000, p. 291).

To realize that we can derive results of operation in network level, we have to start on the path leading us to the notion of an ongoing analysis of developments in

the network (and not a specific observation) allow us to contemplate any results of cooperation in interorganizational network because this is an organizational form for long-term and therefore have to be on the table not the immediate results of the network but the rewards of a fruitful relationship for longevity you can achieve. Simultaneously, an interorganizational network is guided by not being static in form and property relations, is an ongoing process that requires continuous observation if we want to realize your results (Shane 1996, pp. 216–383).

Both academic theory and organizational development demonstrate a reduction in scale enterprises, whose hierarchies are being replaced by networks, which indicates how radicals have been changes in the environment and the necessary impact on attempts to adapt organizations in terms of their structure. These aim, however, more flexibility, less bureaucracy and more capacity for innovation, and technological progress both threat – adapts or decays – as an increasingly available to a growing number of individuals and organizations the opportunity. So either the size of a company or organization or its organization network and its performance assumes, on the basis of its success, the implementation and integration of management practices. The implementation of these practices may be dependent on certain contextual factors. In the model proposed here are four contextual factors whose importance is intended to be explained: the creation of network growth Ages; Sector to which it belongs; Geographic concentration; Network size.

3.2.2 *Networks of Health and Welfare and the Determinants of Exclusive Territorial*

We believe that trust is a prerequisite for improved performance, and competitive success in the new business environment. No doubt that applying franchising to the health and wellness industry, we need to take into account all the processes of structuring. The system of relationship between franchisor and franchisee and the results of a network level are dependent on the eminence of the process and mechanisms of management (Brickley and Dark 1987). Within services, the business areas that permeate the highest number of units are shipping services and business support, aesthetic, health and wellness, financial consulting/auditing and insurance, real estate, convenience services, travel agencies and training and education.

The Health and Wellness are increasingly sought after by people considering the benefits and transformations that operate in your own life (Nogueira 2014). Health promotion in terms of practical, performance and structure, becomes a rule in the current context. According to Sousa (2006, p. 49). "... [A] s current practices of health care in the Western world are the result of the care practices over thousands of years. This ancient building flows into current practices and representations of health care." The accountability of individuals for care for themselves changed the paradigm of "cure" for the "welfare", through the maintenance of it being proficiency of each. For this to occur, they can use a universe of technologies of the self, techniques that are defined at the outset by its dynamic nature, in that they are constantly assimilated and shared as social practices. It is in this context

of diffuse power, self-regulating – in contract, accountability and based on a set of resources, techniques and media that individuals will terms, reflectively, building their own conception of health and well-being. It is also in this design, which create health centers and welfare aspire an individual problem solving through innovative structures.

The health states as the mirror of a new worldview and life, where the desperate new and coveted lifestyle autonomous, flexible and hedonists, which, through biomedicine and a new model of social regulation became reality. "Health identities (and Thus health itself) are legion, constituted from both the biological and the social, the materials and the psychic forces that defines what a body can do" (Fox and Ward 2006, p. 476). In undermined by pressure environments society, the "moral" of the aesthetic look and ego-building the preponderance of health and well-being change-releasing new premises for the relationship between the individual, the body, the welfare and social expressed in new ways and lifestyles. This is where franchising comes as a way of tackling social issues, either by rationalizing costs and resources, either by rapid way of entering the market based on an innovative organizational dynamics. However, the trust is crucial in this type of business, taking into account the idea of organizational sustainability (Carvalho and Vazquez 2009).

In order to avoid factors that cause situations of hold-up and free-ridding the franchise relationship, seeks to avoid uncertainty and mistrust. The parties involved in this relationship, tend to use trust as a form of organizational behavior who cares about their investments and the use of market. The contractual design of franchising networks, the implications for relations as bilateral agency relationship, the mechanisms of network management and the determinants of the intensity of use of multifranchising in franchising networks are factors to be considered in this type of organizational structure (Carvalho 2011). One mechanism that has been identified to solve management problems is the territorial exclusivity. Territorial protection is an incentive that reduces the moral hazard problem of the franchisee and the franchisor. Firstly, the franchisee will be more encouraged to not behave opportunistically when no other establishment of the network (owned by franchisor or franchisee) the area in which it is located, since when this occurs is in favor of all sales generated the mark in that area. Secondly, territorial exclusivity eliminates the possibility that the franchisor grants another franchise that could even destroy and cannibalize sales of the franchisee which already operates in a particular territory.

In economic literature, there are mainly two perspectives on territorial exclusivity. Those who argue that there must be a contractual clause that prevents the franchisor to have behaviors hold-up – the appropriation of returns franchisee with investment in setting up a unit in the local market, or the prospect that the franchisor must correct the free-riding avoiding problems arising from the competition between franchisees (Rubin 1978; Mathewson and Winter 1984).

Therefore the problems of hold-up and free-riding, determining decisions of franchisors to provide franchisees with exclusive territories, creating new organizational structures and new forms of systemic control.

In this sense, Carvalho and Vazquez (2010) argue that one of the advantages for a franchisee in owning multifranchising is that it can allow you to influence the decision-making process of the franchisor.

3.3 Methodology

3.3.1 Hypotheses and Study Variables

This study was conducted in two phases: the first took place between 2004 and 2008, in which it made an analysis of the Iberian market in terms of franchising and a second phase running from 2008 to 2012 where he makes a case study a sector that is considered primary (wellness services and health), with Iberian business base and to reveal potential need for management mechanisms to avoid the problems of hold-up and free riding. It was established that in the first phase of our research and prepositions in the second we study a case in depth.

The Hold-up as a Problem. The common view is that exclusive territories are a guarantee of a franchisor that the return on effort / investment of a franchisee shall thereafter be considered not hold up (Mathewson and Winter 1984). This explanation implies that such protection will be offered through contractual clauses, where the threat of hold-up is more serious. The division of activities between franchisors and franchisees creates incentives for parties to meet the terms of their contracts, allowing you to take advantage of the royalties generated by each of them for specific investments (Williamson 1985). In this sense, the franchisees have to make initial investments to cover the costs of equipment, employee training, marketing, website and Internet use, the rate of franchising (right of entry), etc.. It is very important to invest in human capital, sometimes that participation in training is done off site provided by the franchisor (ie at company headquarters). Much of these investments that may be made by the franchisee, is specified in a contractual relationship with the franchisor. Thus, existing methods are varied: from franchisors who make or obtain their profits-based royalties that come from all the sales system, or franchisors who earn an income based on the net profit royalty outlets that they own have (own units). As you can see, franchisors have a great incentive to establish a higher density of outlets in a geographical area that franchisees (Kalnins 2004). Appears to us then the first preposition;

Hypotheses 1. Franchising In the greater is the problem of hold-up, the more likely the franchisor provide franchisees territorial exclusivity. But franchising contracts can mitigate the concerns of franchisees "territorial invasion" (Blair and Kaserman 1983), providing them greater protection in terms of territory. This warranty limits the franchisor with respect to the flow of rents due by the franchisees, as it limits the geographical area (Azoulay and Shane 2001) territorial exclusivity mitigates this problem. Indeed, one of the goals of this contract is to select a franchisor, a distributor, a local monopoly for trade mark in question, do not feel that there is an increased likelihood of receiving most of the benefits generated by services (Mathewson and Winter 1984) then suggested the second proposition:

Hypotheses 2. The higher the risk of increased free-riding the likelihood of territorial exclusivity.

Note that the Free-riding lies in the dangers that appear in situations where entries from more than one franchisee can affect the value of the final service and / or product, but where, due to incomplete contracting and difficulties of mediation, neither party

involved in the contract is able to capture the benefits (or costs) of their individual efforts (Mathewson and Winter 1984). In the absence of safeguards applying control transaction parties can act sometimes opportunistically, i.e., the choice for the supply of goods or services, either internally or externally, will generate an effort at levels that optimize individual returns over returns to the set (Bork 1978).

Individual franchisees often provide services that can benefit other franchisees of the same franchise system (Rubin 1978). This occurs when, for example, the sale of services involves situations where technical or complex products (Miracle 1965) require that customers be given extensive information on the pre-sales services, in the form of information about the product or actual demonstrations. Although such services are important to customers, they also pose potential problems as the distributor, which does not offer such services, can independently create the same without great additional costs. A dealer may offer a discount if you do not need to provide technical advice and franchisees, in this case, will have lower costs and can offer the product to end customers at a lower price. In many situations, the supplier who offers this discount can pursue a low cost strategy because there are full-service distributors available that perform customer service when it is needed. However, there is a potential free-riding in that buyers can separate these presales services or from the sale of the product itself in itself or, where services cannot be billed separately (Mathewson and Winter 1984).

Territorial exclusivity variable was used as the dependent variable. This is a dummy variable that takes value 1 if the franchisor provides its franchisees exclusive territories. And if there is 0 otherwise. The Hold-up (Table 3.1 attached) and Free-riding (Table 3.2 in Annex) (Cady 1982; Dutta et al. 1999) were used as independent variables.

Control variables as network size and the age of each franchise system, measured by the number of establishments and the age of each chain were used (Winter 1993). To discard this 43 observations, those in which there are only three or fewer observations within the sector (see Tables 3.3 and 3.4). Finally, the sectors of fixed effects were included in the regressions. To discard this 43 observations, those in which there are only three or fewer observations within the sector, in chains with and without territorial exclusivity (see Tables 3.5 and 3.6).

3.3.2 *Phases of the Study*

As we have already mentioned earlier, this study was conducted in two phases: The first one took place between 2004 and 2008, where we did an analysis of the Iberian market in terms of franchising and a second phase running from 2008 to 2012 where a case study of the health and wellness sector, with Iberian based business.

Phase 1: Characteristics of the Sample. In the first phase of the study were analyzed sectors of franchising Portuguese and Spanish from 2004 to 2008. To obtain the data questioned marketing managers and sales representatives of eight companies belonging to Spanish and Portuguese franchising. Using these interviews and all available documentation, developed a draft questionnaire that was tested in three marketing managers and sales. This initial questionnaire was administered personally and later improved, based on feedback received. Then revised the questionnaire

Table 3.1 Descriptive statistics and correlation coefficients

	Growth in sales per outlet (%)	% of outlets discontinued	Territorial exclusivity	Misalignment	Initial investment required (×100,000 €)* level of specific investments	Free-rideable services	Chain size	Chain age	GRP (%)
Mean	7.49	4.12	0.71	0.17	3.25	5.31	34.62	8.92	3.29
S.D.	9.26	1.35	0.46	0.35	1.96	2.69	32.11	7.86	1.09
Growth in sales per outlet		−0.315*	0.168*	−0.201*	0.096	0.084	0.089	0.054	0.281*
% of outlets discontinued			−0.279*	0.182*	−0.103	−0.033	−0.249*	−0.164*	0.177*
Territorial exclusivity				0.033	0.229*	0.307*	−0.133*	0.004	−0.004
Misalignment					−0.055	−0.018	−0.081	−0.063	−0.031
Initial investment required*Level of specific investments						−0.067	0.082	0.026	0.058
Free-rideable services							−0.004	0.072	−0.031
Chain size								0.121	0.045
Chain age									−0.014

Note: *Correlation statistically significant at 5 % level

Table 3.2 Probit estimates for exclusivity choice (1=adoption of territorial exclusivity; 0=otherwise)

Independent variables		
Initial investment required*Level of specific investments	0.82***	0.67***
Free-rideable services	0.77***	0.63**
Chain size	−0.64**	−0.79*
Chain age	0.08	0.19
Sector fixed effects	NO	YES
Observations	145	102
Pseudo R2	0.39	0.46

Notes: Two-tailed tests
†p <0.10; *p <0.05; **p <0.01; ***p <0.001

Table 3.3 Effects of territorial exclusivity on the performance outcomes

	Growth in sales per outlet	Growth in sales per outlet	% of outlets discontinued	% of outlets discontinued
	(1)	(2)	(3)	(4)
Territorial exclusivity	1.830***	1.710**	−1.234***	−1.135**
Chain size	0.005	0.009	−0.019**	−0.028*
Chain age	−0.009	−0.017	−0.092*	−0.131*
GRP	0.715***	0.631***	−0.226***	−0.285***
Sector fixed effects	NO	YES	NO	YES
Constant	3.75**	3.49*	7.22***	7.61**
Observations	145	102	145	102
Wald chi^2	62.326	74.631	79.362	90.324

Notes: Specifications that do not account for self-selection of the exclusivity decision. Two-tailed tests
†p <0.10; *p <0.05; **p <0.01; ***p <0.001

Table 3.4 Effects of territorial exclusivity on the performance outcomes

	Growth in sales per outlet	Growth in sales per outlet	% of outlets discontinued	% of outlets discontinued
	(1)	(2)	(3)	(4)
Territorial exclusivity	0.624	0.798	−0.427	−0.386
Lambda	1.096***	0.885**	−0.851***	−0.731**
Chain size	0.002	0.001	−0.014**	−0.021*
Chain age	−0.012	−0.007	−0.069*	−0.048*
GRP	0.602***	0.463***	−0.234***	−0.176***
Sector fixed effects	NO	YES	NO	YES
Constant	4.44**	3.22*	6.80**	7.29*
Observations	145	102	145	102
Wald chi^2	72.619	78.142	86.539	97.321

Notes: Specifications that do account for self-selection of the exclusivity decision. Two-tailed tests
†p <0.10; *p <0.05; **p <0.01; ***p <0.001

Table 3.5 Effect of misalignment in exclusivity decision on the growth in sales per outlet

	Chains with territorial exclusivity		Chains without territorial exclusivity	
	Growth in sales per outlet	Growth in sales per outlet	Growth in sales per outlet	Growth in sales per outlet
Chain size	0.003	0.006	−0.002	−0.005
Chain age	−0.019	−0.031	−0.032	−0.028
GRP	0.682***	0.489**	0.456*	0.634†
Sector fixed effects	NO	YES	NO	YES
Lambda	−1.006**	−0.814*	−0.633*	−0.552†
Constant	6.214**	5.526**	5.195*	7.624†
Observations	103	70	42	32
Wald chi^2	34.96	40.22	12.07	14.27

Notes: Two-tailed tests
†p <0.10; *p <0.05; **p <0.01; ***p <0.001

Table 3.6 Effect of misalignment in exclusivity decision on the proportion of outlets discontinued

	Chains with territorial exclusivity		Chains without territorial exclusivity	
	% of outlets discontinued	% of outlets discontinued	% of outlets discontinued	% of outlets discontinued
Chain size	−0.027*	−0.035†	−0.041†	−0.019
Chain age	−0.107†	−0.086	−0.178	−0.139
GRP	−0.163***	−0.217**	−0.243**	−0.174†
Sector fixed effects	NO	YES	NO	YES
Lambda	−0.734**	−0.630*	−0.524*	−0.453†
Constant	6.812***	6.968**	7.642*	7.868†
Observations	103	70	42	32
Wald chi^2	38.67	46.18	14.43	17.24

Notes: Two-tailed tests
†p <0.10; *p <0.05; **p <0.01; ***p <0.001

to a new set of 20 managers in marketing and sales of franchise systems which served to fix a set of remaining ambiguity was applied. Finally, the survey was conducted via email. Sending the questionnaire via e-mail so it seemed the most appropriate one since, according to Campbell (1955) the appropriate criteria are those that serve to place individuals who are knowledgeable about the phenomenon, and willing to talk, both are able to communicate with the researcher on the phenomenon under study. When organizations are contacted by us as a franchisor, by phone, in order to locate a person within the company with the knowledge and the necessary motivation, immediately generates an adverse reaction to not provide information Seidler (1974). In most cases, formal titles of potential communication channels, were driving sales or marketing managers, and it was there that stemmed restrictions (Armstrong and Overton 1977, pp. 396–402).

Questionnaires to these potential informants were sent, with all members of a population of 726 franchising chains identified in Tormo&Asociados and Guides Franchising. A total of 175 companies (24 %) responded, 30 of these responses have been destroyed due to the lack of any data. 145 responses (Table 3.7, attached)

Table 3.7 Distribution of sample chains by sector

Sector	Number of franchise chains	Sample %
Adventure	1	0.69
Automobile services	6	4.13
Beauty and personal hygiene	4	2.75
Cafés & ice-cream	4	2.75
Ceramic surfaces	1	0.69
Cleaning-interior restoration	1	0.69
Clothing-fashion	16	11.03
Computers	4	2.75
Consulting firms	6	4.13
Cosmetics	5	3.45
Drugstore	3	2.06
Dry-cleaning	6	4.13
Food and bakery	3	2.06
Furniture and decoration	4	2.75
Hairdresser's	1	0.69
Herbalist's	2	1.38
Jewelry and costume jewelry	3	2.06
Leisure	2	1.38
Lingerie and notions	3	2.06
Office-stationer's	2	1.38
Personalized editions	3	2.06
Photography	1	0.69
Printing and signs	2	1.38
Real estate agencies	5	3.45
Restaurants	19	13.10
Specialized products	3	2.06
Specialized services	7	4.83
Specialized shops	6	4.13
Sports	2	1.38
Teaching	6	4.13
Telephone stores	2	1.38
Textiles	2	1.38
Transport services	3	2.06
Travel	4	2.75
Vending	3	2.06
Total	145	

Note: The sample consists of 145 business format franchising networks from 2006. Sectors with three or less observations are marked in *italics*

were used in the study. The sectors represented in the sample were compared with the existing population. The sample and the population do not seem to differ by sector. An analysis was also made to the first respondents (first half) with the second respondents (second half) following the procedure Overton and Armstrong (1977). No significant differences were found between the scores of the first and respondents' seconds. An additional approach to assess the impact of non-response was compared

with the characteristics of the population surveyed. We also made a comparison between the age of franchising, the average investment, the number of stores owned by the company (owned units) and franchised units, franchise network, the size in terms of total number of establishments and franchise fees (royalties and advertising). These did not reveal a statistically significant ($p > 0.05$) between the two groups for all variables, except for the average investment (in this case, the test revealed no statistically significant differences at 10 %), increasing confidence in generalizes the results for systems of franchising operating in Portugal and Spain.

Phase 2: Study of Network Health and Welfare. This phase aimed, as already mentioned, to investigate and understand some elements concerning the role of franchising networks among franchisees that are in a network that facilitates the multifranchising and territorial exclusivity. We sought to effect a network that were part of the sample observed by us between 2006 and 2008. Selected The network belongs to the Health and Welfare Sector. (1) What do you think of franchisees franchising networks: to facilitate the achievement of this objective, interviews, semi-structured, to all franchisees of the network, which contained three questions of delimitation of the research, were performed? (2) What is the importance of territorial exclusivity and multifranchising? And (3) what are expectations about its use in support by the franchisor?

Like any other professional Franchisee leverages his knowledge to put into practice in their daily lives. So, the speeches analyzed allowed us to understand the elements that constitute the underlying features of the concept of network and multifranchising. Three sections contextualize the types of categories and their respective subcategories, in order to analyze all the contents, fundamental, obtained through the interviews were prepared. We analyze the "thinking on the internationalization of franchising" (Rondan et al. 2012), participation in the network and, finally, the expectations on the use of networks in depth franchising.

3.4 Discussion of Results

As regards the first phase is due to the nature of the dependent variable for specifying a probit model equation was used for the decision. First, we found support for Proposition 1, which states that the greater the hold-up problem in franchising, the greater the likelihood that the franchisor allows the franchisee territorial exclusivity clause system. Consistent with the prediction, we found that whenever the problem of hold-up increases simultaneously increases the likelihood of territorial exclusivity. It therefore appears that franchisors can assuage the fear of hold-up, providing franchisees territorial exclusivity. Ie, territorial exclusivity is a guarantee for the franchisor, the return on fixed investment Franchise and this will not be subsequently considered hold-up (Mathewson and Winter 1984; Azoulay and Shane 2001). The results also support Proposition 2. Estimated parameters measure the importance of the problem of free-riding and show a positive and significant effect on the adoption of territorial exclusivity. Given that in some systems Franchise franchisees offer presales services – such as information about the product or actual statements – that can benefit other franchisees of the same chain, the potential for free-riding exists.

Territorial exclusivity alleviates this problem by making local monopoly franchise the brand in question, which increases the likelihood that they will receive most of the benefits generated by the provision of services (Mathewson and Winter 1984).

Regarding the control variables, we observed that the larger the size of a franchising network, the less likely that the franchisor allows the franchisee have territorial exclusivity. This evidence can be explained because the larger the size of a franchising network, the greater the reputation of the franchisor and therefore lower the risk of hold-up perceived by franchisees. Hence there is less demand for franchisees territorial exclusivity.

In the second phase of the study found that the studied network has the advantage of being a low-cost concept, which allows it to be marketed as an innovative structure (Carvalho 2011). Won the innovation award franchising in 2011 and became a company with the ability to capture entrepreneurs. The mechanism of coordination and organizational form based on the financial element, where the minimum capital input are € 29,500, has a value of 250 € royalties and an advertising fee to the same value. Provides training at its headquarters and in the workplace. Each month a technician visit the shops of franchisees to provide direct support. The marketing plan is prepared by the organization and communicated via email to franchisees. Using the documents, specifically the Franchise Agreement, we found that it contains 60 clauses and its annexes. As there is in national legislation some treat this type of business, it resorted to legislation at Community level as there are some legal rules, expressly refer to the figure of franchising and are applicable to countries of the European community, more specifically Portugal and Spain.

The Health and Welfare claim themselves as the mirror of a new vision of the world and of life, where the desperate new and coveted lifestyle autonomous, flexible and hedonists, which, through bio-medicine and a new model social regulation, become reality. "Health identities (Thus and health itself) are legion, constituted from both the biologic and the social, the materials and the psychic forces that defines what a body can do" (Yin and Zajac 2004).

So franchising appears as the innovative and entrepreneurial nature option. The idea arises, the brand is born, the organization creates the need and the reality becomes profitable and competitive. Think small think wise.

Thus, we can control the behavior of organizational Health and Welfare networks face the hold-up and free-riding, avoiding upsets, lack of structure and, subsequently, lack of brand awareness.

3.5 Conclusions

The results of this study suggest that the adoption of restrictions on territorial exclusivity in relationships franchising follows a logical efficient. If franchisees fail to appropriate the value of their investments, these investments will be reduced. Therefore, the provision of territorial exclusivity can be an effective solution for the protection of such investments. However, to complement the results obtained, future research should examine the effects of territorial exclusivity on the performance of the network franchising. However, for now, the major contribution of this research lies with the

professionals who work in the networks of health and wellness as they seek to identify contractual and organizational decisions that franchisors can take to improve the performance of their networks avoiding this so as to rupture. Moreover, the franchising networks in health, when properly structured and supported, can contribute to the development of a sector that is presented today with extreme relevance in socio-economic terms throughout the European Union (EU). Currently weighs about 7 % of EU GDP and about 9 % of all workers, this same space, are employed in the health sector (Nogueira 2014). This new organizational model can potentially contribute to a sector booming as is the health and well being, not only for the development of the sector itself as to the sustainability of the business in this area internationally.

Appendix: Surve

Variable	Questions	
Territorial exclusivity	Q1	Franchisor provides their franchisees with exclusive territories
Growth in sales per outlet	Q2	Average annual growth in sales per outlet in the franchise system in 2006, 2008 and 2010
Proportion of outlets discontinued	Q3	Number of outlets discontinued in the franchise system in 2006, 2008 and 2010
Proportion of outlets discontinued	Q4	Number of outlet in the franchise system at the beginning of 2006, 2008 and 2010
Level of specific investments	Q5	The level of specificity of the investments made by the franchisees is high (e.g., in case of relationship disruption franchisees will lose the value of such investments to a great extent). (Seven-point semantic differential scale)
Free-rideable services	Q6	The franchisees provide a high level of services that are free-rideable by other franchisees of the franchise system (e.g., due to the fact that the products/services traded require an important distributor promotion or they are technical or difficult to use). (Seven-point semantic differential scale)
Chain size	Q7	Number of outlets of the franchise system in Spain and Portugal at the beginning of 2006
Chain age	Q8	Age of the franchise system in Spain and Portugal at the beginning of 2006

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Chapter 4
Eurocity Chaves-Verín: Regional Development Strengthened by Spa-Linked Research and Professional Education

Veronika Joukes and Isabel Costa

Abstract The Galicia–North Portugal Euroregion boasts the highest number of hot springs of any area on the Iberian Peninsula. This chapter highlights how two bordering towns gifted with about a dozen of mineral hot water springs–Chaves in northern Portugal, and Verín in southern Galicia–started to work together on a more intensive basis and joined to create the Eurocity Chaves-Verín (ECV), in 2007. In 2008 the strategic plan privileged water as a catalyst for regional development and adopted the brand name "Eurocity of Water". It is our aim, then, to perceive the role of water in the programs/projects in and around ECV, either with public or private funding. Drawing on an analysis of the ECV website, as well as programs and projects operating in the ECV territory, we conclude that water is central in many of these programs/projects, and that it has a unifying and sustainable role in the region, as it joins not only endogenous resources and health and spa services with tourism, but also research and professional education. Strengthening the cluster education/research to promote the sustainability of water-projects seems to be a distinctive feature of ECV, in line with strategic trends in Europe and specifically in the Eixo Atlântico and the Galicia-North Portugal Euroregion.

4.1 Introduction

In this chapter we focus on the case study *Chaves-Verín, Eurocity of Water* (ECV), situated on the border between Northern Portugal and Galicia, North-western Spain. ECV, the first of the four Portuguese-Spanish cross-border eurocities, centres a main part of its strategic agenda on water, one of the guiding lines of this book.

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The aim of this chapter is, then, to perceive the role of water in ECV projects, more particularly in which way this natural resource is being combined with other areas to improve regional development, thinking not only of locals but also of tourists.

Any program/project has at least three levels: the conception level, the implementation level and the evaluation level (Cortesão and Torres 1989). In this chapter, we focus primarily on the conception level of programs and projects, leaving aside details about the ways they are being executed. Namely, we focus on the ways in which water is conceived as a feature of fostering regional development in and around ECV.

After briefly characterising the ECV territory, we address the birth and development of ECV. Then, we give an overview of a number of projects related to water in this territory that were submitted for European funding, and finally we look to the role of education and research in a selected set of projects that endorse water as a central element in the Eurocity.

Methodologically, we rely upon an analysis of not only print and online secondary documents, but also primary sources ceded by ECV as well as digital information from the aforementioned organisations' websites. In particular, the ECV website has been recognized as providing rich data for research (Heinz 2012, p. 48). As a matter of fact, ECV has been the target of research/reflection publications. Most of the authors use the perspective of regional development, concentrating mainly on ECV specificities (Ladeiras and Pardo López 2008; Figueroa Dorrego and Pardellas de Blas 2009; Pardellas de Blas and Padín Fabeiro 2013). Heinz (2012) includes ECV in a comparative exercise with other eurocities and Lois (2013) reflects abstractly upon the significance of the ECV border. The methodology used by these border study experts inspired our approach.

4.2 Brief Presentation of Eurocity Chaves-Verín, the Eurocity of Water

We start with a brief presentation of ECV's territory, listing some basic geographic, demographic, historic, accessibility and socioeconomic characteristics, referring also to the potential of ECV for tourism in the context of regional development.

ECV is located in the northwest of the Iberian Peninsula, on the inner border of the Galicia-North Portugal Euroregion (Figs. 4.1 and 4.2). It covers a total area of 51,000 km^2 and houses a population of 6.4 million inhabitants (which equals a population density of 125.8 inhabitants/km^2) (Pucher and Radzyner 2012, p. 64). On the common border, two cities are located: Chaves, in Portugal, and Verín, in Galicia, which, in 2007, formally decided to create ECV, a conurbation of 55,913 inhabitants spread over 685 km^2, as shown in Table 4.1.

The historic centres of these bordering cities are only 30 km or a 25 min drive away from each other. Both towns have a long history that can be testified to by patrimony with elements from the pre-historic age till now. Chaves was once a Roman municipality named *AquaeFlaviae*, due to the qualities of its hot mineral springs. As for Verín, it can, for example, pride itself on its XII century strategic building, the Monterrey castle (ECV 2013a).

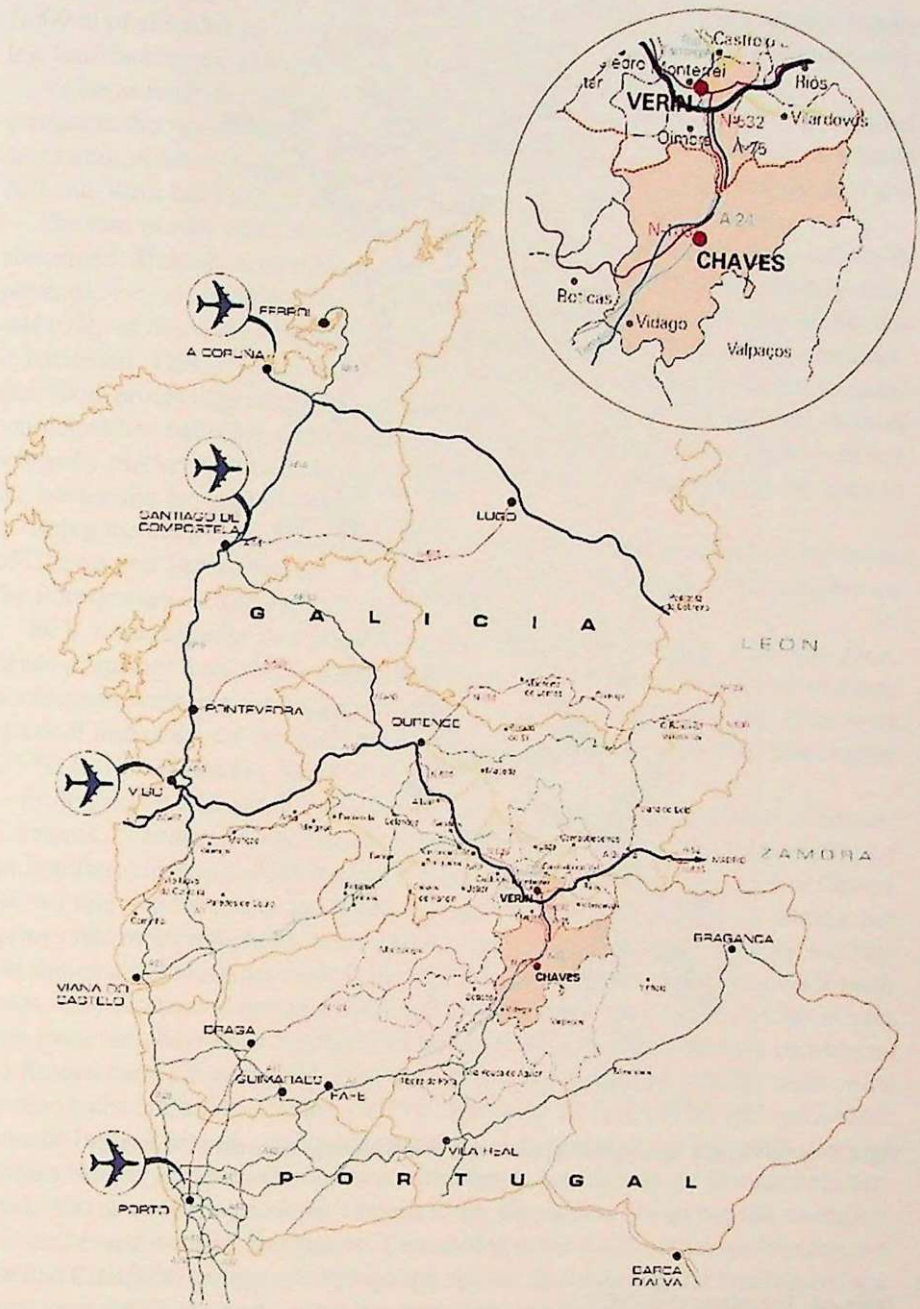

Fig. 4.1 Map of ECV localisation within the Galicia-North Portugal Euroregion (Source: ECV 2014c)

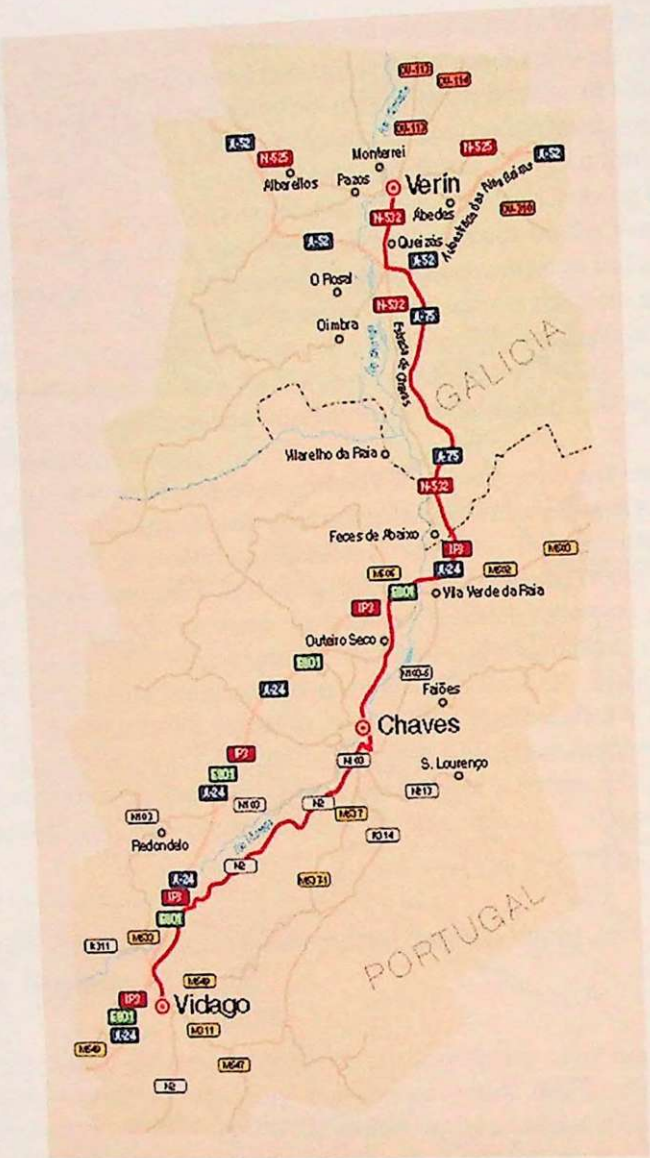

Fig. 4.2 Map of ECV centring on the roads that join the springs (Source: ECV 2014b)

Table 4.1 Population of the ECV

	Population	Population – town centre	Parishes	Km²	Inhabitants/km²
Chaves	41,280	18,500	39	591	69.840
Verín	14,633	10,000	15	94	155.670
Total	55,913	28,500	54	685	112.755

Sources: ECV (2013a, p. 6) and INE (2014a, b)

The landscape of ECV is green, fresh and pleasant, with mountains (under 1,000 m of altitude) and valleys, the most notable being the Monterrey/Chaves valley, fertilised by the Tâmega River, that links Verín with Chaves.

As far as roads are concerned, apart from the municipal roads which are in good condition, the two towns are linked by a motorway. ECV is now an easily reachable destination: Chaves is connected by highway to the rest of Portugal (via the A24 and A7) and Verín has the A52 motorway which links it to the rest of Spain.

The two border areas are not too different as far as their economic activity is concerned. Sharing an extensive and fertile valley, in the Portuguese territory corn, potatoes, rye, a mixture of vegetables and fruits, and wine are produced. On the other side of the border, mainly wine, apart from a mixture of fruits and vegetables, is harvested. This is not an industrial area, but there are quite a lot of construction and food processing companies, for example some water bottling units in both municipalities and a few other industries. There is a business park, which integrates a logistic platform, in Chaves, and another one in Verín; both of them are close to the border and the motorways.

Being the centre of a rural territory, services are the main strength of the towns of Chaves and Verín. Tourism is an important sector, especially health tourism on the Portuguese side and cultural tourism in Verín.

ECV is remarkably rich in high quality mineral springs (Fig. 4.2). The abundance of springs is due to the Penacova-Régua-Chaves-Verín tectonic fault that runs north–south, crossing the border territory. This explains why the springs share some physical and chemical properties, varying mainly in their emergence temperature (15 °C to 73 °C) (Joukes 2007; ECV 2013a).

Following a north–south trajectory, in Verín, five springs are well known: Sousas, Cabreiroá, Fontenova, Caldeliñas and Fuente do Sapo. The first three are being used for bottling activities and the others are not in commercial use. In the north of Chaves we can find Segirei spring and Facha spring, near Vilarelho da Raia. In Chaves, hot springs rise in several places in the centre of the town. They were one of the key factors that made the Romans settle in the area (Machado 2006). In fact, original Roman baths were discovered between 2004 and 2008 in the historic centre of Chaves, and ever since they have been the object of archaeological studies. These are monumental Roman baths, in unusually good condition when compared with the other main Roman baths in Europe (Carneiro 2013). Displaying the original hot spring, Chaves' Roman Baths Museum (under construction), a few steps from the 2000-year-old Roman bridge, is expected to become a reference attraction in the Roman bath network. 500 m away, also near the Tâmega River, the modern hot spring spa, an important health and wellness destination. Descending to the south of the municipality, we can find Campilho springs and Vidago springs, the last ones used for bottling and spa treatments inside the park of the internationally renowned five-star Vidago Palace Hotel. We are just mentioning the most well-known springs, however there are more springs on both sides of the border that are used by locals but do not have enough flow to be commercialised (Joukes 2009b, p. 3; ECV 2013a, pp. 12–23).

Mentioning water in ECV is not only about mineral springs but also about the Tâmega River and the streams that run along the mountains into the valleys.

As shown in Fig. 4.2, the Tâmega River begins in Spain, not far from Verín, crosses the Monterrey/Chaves valley, and debouches in the Douro River, in the village of Entre-os-Rios. Given its morphology–perpendicular position (north–south) on the border (east–west)–we can say that the Tâmega River joins the two towns (rather than separating them, as usually happens with other rivers on the border) (ECV 2012b, p. 69; Pardellas de Blas and Padín Fabeiro 2013).

The identity of ECV is completed with other particularities like gastronomy, handcrafting (Verín masks, the black-coloured pottery of Vilar de Nantes in Chaves), the Portuguese Inland Way of St. James, music, traditions (the Carnival in Verín, the Santos market in Chaves), which, on the whole, deserve to be worked upon as tourist attractions (Caminho 2012; Pardellas de Blas and Padín Fabeiro 2013). One last essential element should be mentioned to underline the common roots and smooth dialogue of the residents of both towns: in general, they can easily understand each other, as Galician is somewhat similar to Portuguese, since they were the same language not so many centuries ago (Lapa 1979).

4.3 Birth and Concept of Eurocity Chaves-Verín

The two regions, Galicia and Northern Portugal, initiated cross-border cooperation in terms of strategic planning in the 1980s, which gave way to other forms of collaboration, like ECV.

ECV was only possible because the European Union (EU) exists and because this institution promotes regional cohesion and cross-border cooperation. According to the European Union, "cohesion policy encourages regions and cities from different EU Member States to work together and learn from each other through joint programmes, projects and networks" (European Commission 2011). EU policy gave rise to strategic documents in the regions which acted as a framework for further developments, addressing topics such as territorial development, governance, innovation, knowledge, partnerships, financing, culture and urbanism (Domínguez Castro and Pardellas de Blas 2007).

Following the European stream, in the previous decades the municipal councils of Chaves and Verín had been collaborating, for example in European projects of the Third Community Support Framework, thus realising that they were stronger together when promoting their territorial development. ECV was initiated in 2007, taking advantage not only of the launch of the European Fourth Community Support Programs for 2007–2013 but also of the fact that it was integrated in larger institutions with huge experience in European project management: the Galicia-North Portugal Euroregion and the city network *Eixo Atlânticodo Nordeste Peninsular* (Pardellas de Blas and Padín Fabeiro 2013).

ECV is a POCTEP cross-border cooperation project encouraging regional cohesion with ERDF co-financing. It took full advantage of the 2007–2013 territorial cooperation objective, with its emphasis on territorial cooperation, and strive for growth and more employment. But it goes further and integrates third generation objectives,

namely cooperation which aims to foster Euro-citizenship at a community level. Furthermore, ECV aims to be a living laboratory, creating the conditions to actually be a functional cross-border community. The ECV actors try to do so, following the strategic agenda that was elaborated, after a consultative and participatory series of hearings, by a working group of experts (Domínguez Castro et al. 2008).

The general aim of ECV is to strengthen economic and social cohesion, promote cross-border cooperation in its territory and, thus, foster regional development, and improve the quality of life of its citizens, addressing domains such as trade, agriculture, tourism, natural resources, transportation, communication, culture, education, sports, health, and so on. The agenda defined three strategic pillars for building the Eurocity: euro-citizenship; sustainable territory; cross-border economic dynamic (Domínguez Castro et al. 2008). But what is most striking (certainly in the context of this book) is that the strategic agenda launched the brand "Chaves-Verín, Eurocity of Water", as the team behind the agenda considered that the main attraction of this territory is the duo of the Tâmega River and thermal resources (Figueroa Dorrego and Pardellas de Blas 2009).

The ECV's dynamics may be observed in its comprehensive website (Heinz 2012), in Portuguese, Galician, Spanish and English. It includes webpages with, e.g., a list of promoted activities, the most diverse descriptions of what is typical in ECV, an interactive map, and plenty of documents to download, such as routes, the strategic plan, or projects in ECV (ECV 2014d).

We will focus now on water-related projects.

4.4 Water-Related Projects in and Around ECV

In order to attain the aims mentioned above, a number of projects and actions have been presented in ECV, some of which are displayed in Table 4.2. According to its strategic agenda, ECV develops in its territory, mostly with partners, multiple programs/projects that take water as a starting point. However, it is not only ECV itself that puts water into the centre of its projects: other organisations, public or private, also create projects in the ECV territory that imply water.

Table 4.2 summarises the main projects related to water that influence the ECV territory, regardless of whether ECV is one of the partners, thus displaying that water has been privileged as a main stimulus of regional development in ECV and adjacent territories.

We would like to note that not all the projects mentioned in Table 4.2 are the initiative of the Eurocity or under its direct responsibility. Indeed, some of them were created without the explicit contribution of ECV. All the projects were submitted for European funding, some also received private funding (e.g. Unicer), some are concluded and others are still in progress. Another particularity is that some of these projects are complementary, with one component (e.g. infrastructure) being financed by and integrated in one framework program, and another component (e.g. an immaterial component) being financed by another program, and so on. This is another

Table 4.2 Projects in ECV area focused on water (since 2005)

Name of the project (*and translation*) + Acronym + Site + Code	Main objectives/comments	Funding given by *Project leader*
Centro de Formação Turístico-Termal e de Investigação da Água	Consolidation of a common cross-border strategy for the coordinated development of professional training and research in spa tourism and in water in the Galicia-North Portugal Euroregion	Integrated in POCTEP program and with EU funding via FEDER
(Centre for Education in Tourism and Spa Services and for Water Research)		
EURO-REGIÓN TERMAL Y DEL AGUA	Creation of a Spa Hotel School in Verín	*Deputation of Ourense*
http://www.euroregiontermal.eu	Implementation of a spa for professional education purposes in Chaves	
	Creation of a research laboratory for mineral and tap water in Chaves	
	Implementation of a thermal route across the border area	
Centro de Competências em Turismo, Termalismo, Saúde e Bem-estar	Provision of services, particularly in the areas of health and wellness, management and quality control, development and technological innovation and technology transfer	With FEDER funding via O NOVO NORTE and RedeecoCITRAS (network of ecological and innovative cities of Trás-os-Montes)
(Competence Centre for Tourism, Spa, Health and Wellness)		
AQUAE	Development of research and experimental projects	
	Promotion and dissemination of results	
	Competence building and propagation of scientific and experimental knowledge	*Chaves Municipality*
	Forum for cooperation within the sector	
Balneário Pedagógico de Investigação e Desenvolvimento de Práticas Termais de Vidago	Creation of a pedagogical spa for research and development of spa practices in Vidago (transforming part of the ancient railway station), in relation with Euroregión Termal e del Água	With FEDER funding via PROVERE program
(Pedagogical Spa for Research and Development of Spa Practices in Vidago)		*Chaves Municipality*
CAMPUS DA ÁGUA	The University of Vigo dedicated the campus in Ourense to water, giving priority to water-linked research, development and innovation and boosting of a multidisciplinary network to integrate research, teaching and knowledge transfer. Negotiations involving higher education organisations to cooperate in ECV are in progress	Unknown
(Water Campus)		*University of Vigo*

AQUANATTUR	A private tourist project (UNICER) in Vidago and Pedras Salgadas, that comprises, apart from requalifying emblematic buildings, infrastructure and parks, the preservation of natural and hydro-mineral resources, respecting biodiversity and eco-systems and ensuring economic growth through tourism	Mix of private and public funding (some FEDER funding via PROVERE program)
(*Acronym of the equivalent in Portuguese of the nouns Water – Nature – Tourism)*		
NORTE-05-0227-FEDER-000001		*Unicer*
Valorización del corredor ambiental del río Támega	Improving the management of water resources in the Tâmega valley	Integrated in POCTEP program and with EU funding via FEDER
(Valorisation of the natural environment of the Tâmega River)	Valorising the river as the umbilical cord between the city centres of ECV, whenever possible incorporating natural, historical and cultural elements	*Municipality of Verín*
VALTAMEGA		
http://pt.eurocidadechavesverin.eu/projetos/em-curso/valtamega 0674_VALTAMEGA_1_E	Developing and promoting the connection between the people of the two border towns through the riparian areas and associated ecosystems	
	Monitoring and upgrading the water quality of the river	
	Creating thematic routes along the river, places to sit and rest, and places to practice sports or cultural activities	
Sustainable Health and Wellness Destinations	International conference in Chaves, where experts from different areas reflected together on health and wellness tourism in the broadest sense, with special attention on the Northern Region of Portugal	With FEDER funding via O NOVO NORTE and QREN
CHAVES 2011		
NORTE-07-0927-FEDER-000197		
http://chaves2011.wikispaces.com		*CETRAD* (Centre for transdisciplinary research for development at the University of Trás-os-Montes and Alto Douro)
Museu das Termas Romanas	Creation of a Museum to preserve and showcase the Roman Baths	With FEDER funding via O NOVO NORTE and QREN
(Museum of the Roman Spa)		

Sources: Based on the application forms of the candidatures, the websites mentioned above, including the Eurocity's, and Joukes (2007, 2009a, b), Domínguez Castro et al. (2008), Heinz (2012) and ECV (2014a)

indication that in ECV different organisations are cooperating towards a sustainable use of water, which is seen as a valuable and distinct resource. That is, these projects support water as the region's brand, so, in one way or another, they are all in the same line and strengthen the strategic agendas of ECV and the Galicia-North Portugal Euroregion. The ECV website gives full details to visitors on the local tourism offer, such as the existing water resources. Apart from capital-intensive interventions, constant small-scale initiatives are undertaken, as partially documented in ECV's list of finished activities on their webpage (ECV 2014a), in order to attain ECV's objectives. Some of the events or actions were dedicated to natural mineral water, such as: social spa tourism programs for the elderly, equipping a stand at a specialised spa fair, and a workshop about the future of the Euroregion of water.

The publishing and marketing sector should also be mentioned: the abovementioned website is easy to use and contains plenty of information. Small brochures, maps and tourist guides, informative pocket books and even a menu card with suggestions on how and with what to drink the bottled waters of the Eurocity are available on paper and can be downloaded on the ECV webpage (ECV 2012a, b, 2013a, b, 2014a, b, c, d). The slogan in ECV-related webpages and booklets – "Eurocity, river and springs… Two countries, a river and nine springs" – is another way to make it obvious that water is a central element for ECV.

Furthermore, a tourism strategy has been elaborated, following a set of steps and principles in order to realise this "Eurocity of Water" with numerous facilities for locals on the one hand, and a pole of attractions for visitors on the other hand (ECV n.d, p. 25). Water was moreover integrated into the former and present logo of ECV.

This quick overview makes us conclude that for more than a decade, and in ever more evident ways, the Eurocity has been targeting water as the unifying force around which most of its programs/projects and consequent activities are developed.

4.5 Focus on Professional Education and Research in Water Projects

Looking again at Table 4.2, which lists water-related projects in ECV, and although we cannot go into detail about how these projects' missions are being accomplished, in this section we want to underline a particularity: most of the projects include strong research and pedagogical components. In other words, they support the idea that there is no sustainable development without (professional) education, research and dissemination.

As we have already stated, ECV essentially promotes cross-border cooperation with the objective of making the inner border disappear –this implies that, sometime in the future, citizens are expected to identify themselves more with the Eurocity/European citizenship and less with their Portuguese or Spanish *civitas*. More in particular, as shown in Fig. 4.3, they are expected to achieve this long term and third generation objective through the implementation of a strategic agenda that promotes investment in a mixture of local resources, such as water, nature, patrimony, culture and history.

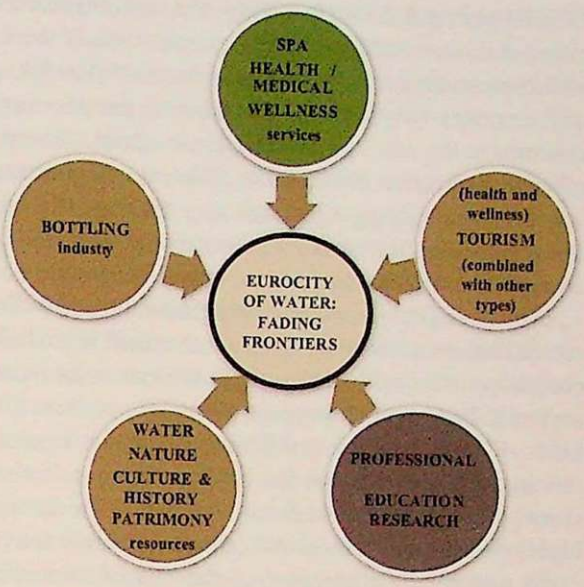

Fig. 4.3 Water-linked Clusters in the Eurocity of Water: Fading Borders

The bottling industry only has a limited influence; spa, health and wellness services give a more fundamental contribution, and certainly the tourism sector is a driver of development in ECV. Nonetheless the sustainability of the whole plan is secured, among other clusters, by giving the proper attention to water-linked education and research. Due to the interrelation of all these elements and thanks to constant efforts, the internal border is slowly fading away and a third generation Eurocity of Water is becoming a reality, as Fig. 4.3 tries to express.

Figure 4.3 also illustrates that the spa, health/medical and wellness services cluster is allied with the resources and tourism clusters. This is a rather usual alliance and, thus, expectable. In the particular case of ECV, another cluster is integrated into the group, one dedicated to education and research.

We draw attention to the fact that research and professional education are great pillars of any project, as they are referred to by Eixo Atlântico strategic headlines (Domínguez Castro and Pardellas de Blas 2007, p. 55) and the European strategy for smart, sustainable and inclusive growth (European Commission 2010). If all the clusters are fully interlinked and implemented and if due importance is given to professional education and research, the last two elements will definitely make the ECV project more sustainable.

In Northern Portugal, the concern about quality is more and more a priority in modern spas (Álvarez et al. 2013). If you want to guarantee quality services, you need highly-skilled people. Professional education, however, be it initial or continuing, in the area of health and wellness, is not sufficiently developed in the Iberian Peninsula (although it exists). In the hot spring spa of Chaves, e.g., the need to improve professional education was detected during a study on quality issues by Del Rio et al. (2014); this should not be underestimated if the aim of the spa industry in

ECV is to be outstanding in quality. The authors recommended "improvement actions aimed at more training and professionalization of the thermal bath personnel, which will improve the quality of service provided" (Del Río et al. 2014, p. 39). That is one of the reasons why we want to underline the presence of educational and research concerns in the water projects we came across. If the projects succeed in creating an efficient interaction between the different components/clusters, they most certainly will have multiplying effects, as they are logically constructed. For example, they foresee research into sustaining the educational assets, as indeed today, in whatever area, professional training can no longer adequately occur without research.

Moreover, professionals in both the health and wellness sector and in the tourism sector seldom work individually, but rather in multidisciplinary teams and are in constant contact with clients, as is the case with most of the professions in social sectors (Marques et al. in press). Certainly in these kinds of teams and under these kinds of circumstances, continuing training is needed. It would be fruitful to see training implemented 'on the job', given the relevance and pertinence of professional training in real working contexts – which has been widely recognised as highly positive in professions within social areas too (Costa et al. 2012).

To underline the potential of the mix of "water, education and research", we come back to two projects described in Table 4.2 that reinforce one other, namely the projects with the acronyms EURO-REGIÓN TERMAL Y DEL AGUA and AQUAE.

These projects were developed around the usual mix of medical, wellness and industrial use of water, combined with culture, nature and tourism; nonetheless, the strategy that was worked out relies strongly on two "minor" features, which moreover differentiate the abovementioned from other similar projects:

1. Education (*lato sensu*): professional education (initial or continuing);
2. Research (& Development).

The EURO-REGIÓN TERMAL Y DEL AGUA project (Centre for Education in Tourism and Spa Services and for Water Research) includes spa and hotel infrastructure and equipment suitable for professional training. It will have two headquarters: one in Verín, a Spa hotel for high quality professional training of hotel staff, and the other in Chaves, for professional training in the spa domain and research on natural mineral water. AQUAE concentrates on Chaves and its main goal is to add to the present spa a Competence Centre for Tourism, Spa, Health and Wellness, where research will be done without neglecting the dissemination of the results (through, e.g., professional training).

Especially in the two abovementioned projects, the components of education and research are stronger and thus they innovate, augmenting the possibilities of long-term growth and dissemination, that is, assuring sustainability for the Eurocity of Water brand. In fact, they are in line with "Strategic Idea number V – commitment to the society of knowledge and innovation" of the Eixo Atlântico (Domínguez Castro and Pardellas de Blas 2007), in particular because education, professional training and employment interactions are pursued, and in line with the Europe 2020 strategy for inclusive, sustainable and smart growth (European Commission 2010, p. 9–10). They respond to Del Rio Rama et al.'s (2014) recommendations, too.

In 2014, spa-school and water R&D laboratory protocols are being signed with universities and other entities from Galicia and Portugal in order to establish partnerships to deploy vocational programs as wellas research. As the teaching will take place in both countries, it is expected that curriculums will be complementary in the long run, which will allow diplomas with double degrees.

An example of a complementary input that capitalises on water and which doesn't come directly from the Eurocity itself, but benefits it anyway, comes from universities. CETRAD, a multidisciplinary research centre of the University of Trás-os-Montes, organised an international conference on sustainable health and wellness destinations in October 2011 in Chaves, producing, among other outcomes, an e-book on Sustainable Medical and Wellness Destinations (Joukes et al. 2013). A spin-off of the Faculty of Pharmaceutics of the University of Porto, Inovapotek – Pharmaceutical Research and Development, is working on transforming the hot spring water of Chaves into dermatological products (Termas 2013).

The projects targeted in the last paragraphs all have a deep bond with research and education. It is not the intention of this text to evaluate how this is put into practice; what we want to stress here is that the Eurocity, the regions, the countries and the institutions, namely the higher education institutions, should be attentive to their role in regional development, subscribing and actively supporting these and other projects which include education and research as pillars of development. If the ECV strategic plan (integrating education and research) does not succeed, the whole rationale of the Eurocity may simply fall apart.

This chapter concentrates on natural mineral water, but there is another type of water which is very prominent in the territory: rivers and streams. The Tâmega River is central for the Eurocity, but, so far, actions to valorise it, including its effluents, have not yet reached a satisfactory level. In the case that efforts to seriously improve the Tâmega River water quality are not determined enough and do not succeed, the situation may provoke serious hindrances. This is a serious weakness, reinforced by the fact that the jurisdiction over the rivers is parked in central government organisations that do not always converge with local ones.

4.6 Conclusions

ECV was created for several reasons: apart from the common (territorial, economic, cultural) resources, there were other converging dynamics at stake such as mutual urban and territorial management problems, integration in very active umbrella bodies like the Galicia-North Portugal Euroregion and the Eixo Atlântico and certainly because of the opportunities to obtain European funding to do together what they were unable to do alone (Domínguez Castro et al. 2008; Pardellas de Blas and Padin Fabeiro 2013). Aware of the fact that this funding would only be obtained with well-reflected arguments which have a long-term impact, the ECV's strategic agenda assigned a central role to (mineral and fresh) water.

On the other hand, combining spa, health/medical and wellness services with endogenous resources such as water, nature, patrimony, culture and history for the creation of different kinds of tourism products is rather usual and, thus, expectable. ECV, however, adds two innovative elements to this process: education and research.

Professional education and research guarantee not only the maintenance of high quality levels in services, but also the commercialisation of scientifically obtained results, two essential factors to position the Eurocity of Water as a distinguished tourism destination and particularly as a good practice example in the health and wellness tourism branch, as well as for professional development in the spa sector.

We can only applaud this sustainable long-term thinking; even more so when they try to be a third generation project, putting Euro-citizenship in first place, and while they are slowly but steadily implementing into the territory what was promised on paper, including both modest and audacious "water-items".

It is our view that education and research – which is the "smart approach" – have the potential to give an essential contribution to the success of this Eurocity of Water. We should remember, though, that the present analysis is focused on the conception level of the projects and that future analysis should investigate at another level – the level of implementation.

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Chapter 5
Promotion and Marketing: Marketing Strategies, Italy, Regional Development

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Abstract Italy is one of the most popular countries in the world with a high number of thermal baths. The country enjoys a deep rooted thermal tradition which started in ancient times, with thermal baths existing since Roman times. Nowadays, thermal tourism is considered as an alternative form of tourism and it means for regional and local development. It is so important that it can have a strong influence at demographic, social, environmental, economic and marketing level. According to the latest data, 15 million tourists visit more than 390 thermal centres in Italy, located in 185 areas. Thermal tourism represents 5 % of the total tourism, but this percentage could soon grow by attracting other types of tourists, unsatisfied with traditional destinations or wishing to satisfy particular requirements. Today, thermal tourism is the combination of thermal sites, well-being and leisure. The aim of this chapter is to evaluate the supply and demand of thermal tourism. On the one hand, we evaluate customer satisfaction. On the other hand, the management of the thermal resorts' website should be evaluated. The survey was carried out through semi-structured questionnaires.

5.1 Introduction

The thermal bath industry has always been a complex and articulated sector in Italy, with the country being a leading player in the offer of thermal baths, focusing on quality rather than quantity. Over the years, the industry has been able to evolve, responding in a better way to the needs of the market, modifying its position by operating on the one hand within the national health system, and on the other hand,

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within the context of tourist activities. One could almost think of a process of homeostasis. The sector, which constitutes a sort of ecosystem, has put in place strategies that have provided valuable solutions to the financial crisis, by proposing new alternatives, adapting to the more and more innovative requests of the market.

This was possible due to the fact that the activities related to the thermal sector for a certain period of time, from around 1950 to 1990, were mainly concentrated within two streams: thermalism and thermal tourism. Thermalism came to develop independently, separating from thermal baths, and became a sector of well-being, based on applications that did not use the therapeutic properties of thermal water, also separating the activity site.

As a matter of fact, health centres were created in large cities, where there are no thermal areas. These wellness centres, identified by the term SPA (etymology of the word salus per aquam which essentially means health through water), opened in the cities and offered their services inside gyms or hotels, responding to that growing demand for well-being, which is now included in many aspects of daily life.

While this division has been instrumental for the growth of that sector of tourism linked to thermal spas, on the other hand, it has become rather confusing for the tourists. Spas, beauty farms, wellness centres and thermal baths have become names that are often confused into a single expression to indicate an offer that will appeal to both the travelling tourist, who seeks a holiday for relax and well-being, and the city inhabitant, seeking shelter from the stress of everyday life in the city. However, this has led to the mortification of the concept of thermal bath tourism. Yet, the concept of thermal baths as a recreational activity was already known during the Roman times, when both the wealthy Patricians and the less fortunate used the facilities, which were located in different parts of the city, with the aim of combining the well-being of the body and the socialization between Romans.

Thermal baths and thermal tourism, although of very remote origin, have combined individual well-being to the places to visit, with a very close relationship between environment and human health. In fact, the main thermal areas are found in specific areas of both natural and cultural biodiversity, that have allowed the areas to develop locally. Therefore, thermal tourism constitutes a variable for the promotion of local economies, in particular in high conservation value areas (Capasso and Migliaccio 2005).

5.2 The Italian Thermal Bath Industry

The modern system of thermal baths in Italy is characterized by the complexity of its structure. As a matter of fact, there are facilities that combine the typical spa activity to other activities such as mineral water bottling, health and wellness services as well as fitness and cosmetic activities. The thermal spas and the so-called thermal tourism are of very ancient origin and have always carried out a social function, since the ancient times (Egyptian, Greek and Roman ages).The actual creation

of the health tourism dates back mainly to the ancient Roman period. It is indeed with the ancient Roman people that the thermal baths developed, conceived both as a place of entertainment and a place to relax and purify the body.

However, it is during the modern period, around 1900, that they become a tourist product, which is able to attract visitors from remote locations. If one analyzes the different cycles of the recreational activities linked to the thermal baths experienced over the years, six generations of thermal activities can be identified. The industry's ability to transform can indeed be verified from an attentive analysis of such cycles.

The first generation, the Recreational Thermalism dating from 1890 to 1930, is a period during which thermal baths not only carry out a therapeutic function, but they also provide relax and entertainment, as well as a more general concept of well-being. Thermal treatments are based upon the hypothesis of a long stay and there is an aristocratic and elitarian approach. This is the period in which the policies of modern territorial marketing begin to be applied to the thermal sector.

The second generation instead is the one of the Social Thermalism. In this case, the sector attributed a therapeutic value to the thermal treatments and the concept of care. The thermal baths were included in ad hoc health policies.

This led to the third-generation, the one of Assisted Thermalism, where mass treatment was launched, with easy access to health care (the services provided are almost entirely paid for by the national health system) which has led to the exclusion of the thermal baths from the tourism industry, excluding it from market logic.

The fourth generation saw the integration between thermalism and well-being, laying the foundations for what is now defined as thermalism, where the aim is to achieve a comprehensive well-being of mind, body and spirit as well, as an integration between body and soul.

During the fifth generation, the thermal activities were oriented towards self-promotion and mental well-being. Thermal well-being not only aims at curing diseases, but above all promotes the physical and mental well-being of a person, in a more general and complete sense.

The sixth generation, the one we are currently experiencing, is the one in which several factors are combined towards a sensory experience of the thermal well-being. The product consists in a series of activities that require the active and convinced participation of the user who, within certain rules and certain treatment protocols, can combine and decide the ways to enjoy the service.

When thermal tourism joins general tourism, thus becoming stronger, the sensory experience (sensory spas) can be the specific object of one's stay or an integration with other types of tourism (rural tourism, conference tourism, etc.). With the sixth generation, there is the recovery of thermal treatments in combination with health education activities, environmental education and valorisation of the local and Mediterranean culture. During this generation, there is a tendency towards what is defined by the literature as total quality of life. A quality of life that is the sum of the personal well-being and the collective well-being.

5.3 Supply and Demand

Analyzing the supply and demand of the thermal tourism in Italy is a very complicated task, due to the complexity and heterogeneity of the structures and the types of users.

With regards to the tourist supply, in Italy there are both health and receiving facilities. In the latter case, the recreational purpose is combined with the therapeutic one.

The main objectives of the Italian thermal enterprises should be to satisfy the demand for tourist consumption which focuses on the psychological and physical well-being; as a matter of fact, nowadays there are more and more packages that offer local typical activities, be they cultural, religious, social and environmental.

Due to the continuous changes in the thermal industry offer, a dichotomy between the product care- thermal treatment and the product well-being has been established, the former driven by the need for preventive health care or nursing and rehabilitation, and the latter to target customers who need to relax, maintain physical fitness and improve the general state of health.

The fact that Italy is the European country with the highest number of thermal baths, especially due to its unique geological shape rich in volcanoes, justifies the role that thermalism has always played in the national economy.

The wellness enterprises in Italy are over 30,000, 78 % of them located in the regions of Northern Italy. Within this set, the well-being spas are 2,488, or 8 % of the total, two-thirds of them in the North. It is estimated that the total turnover of the spas (salus per aquam), half of which linked to hotels, has passed the 1 billion Euros mark in 2009 and reaches a total of 4 billion Euros with all other productive activities.

Thermal destinations and wellness tourism receive 4.2 % of the estimated number of tourists in accommodation facilities such as hotels and other facilities in Italy, or over 15 million people every year (Federterme 2011).

From a territorial point of view, it can easily be inferred how facilities are concentrated mainly in some regions. The distribution between the different areas and regions is conditioned by the high incidence of facilities in hospitality establishments. The regions with the highest number of thermal baths are Campania (114) and Veneto (110), followed by Emilia-Romagna (24), Tuscany (22), Lazio (18), and Lombardy (16). For what concerns Campania and Veneto, given the typicality of the offer, based on thermal hotels, the phenomenon is more difficult to quantify because many services are included in the packages offered and are not registered. From this territorial distribution, it is possible to observe the impact that thermal baths have had in the regions on an economic level. The Northern part of Italy has in fact been able to seize the opportunity immediately, creating many jobs (the data show a higher number of human resources employed and quality of the service) (Federterme 2011).

Tuscany, Veneto and Trentino Alto Adige registered the highest number of tourist flows in thermal baths, both in terms of arrivals and stay. In recent years, room occupancy in the thermal towns, although never falling below 30 %, has experienced a significant decline (Figs. 5.1, 5.2 and Table 5.1).

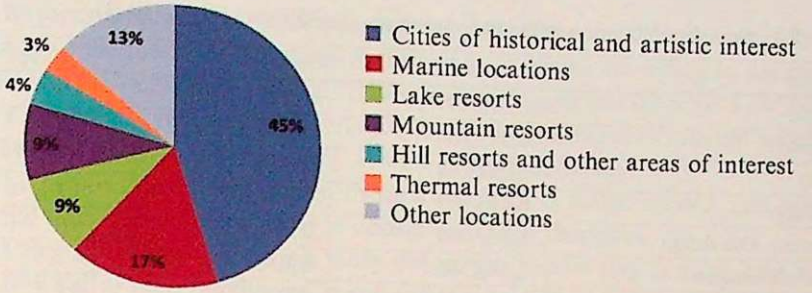
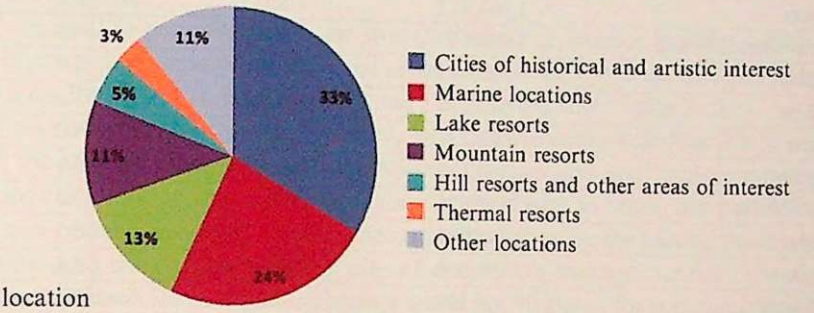


Fig. 5.1 Arrival of foreigners for type of Federterme



location

Fig. 5.2 Stay of foreigners for type of Federterme

The data are different if one considers the thermal industry on the basis of accommodation facilities dedicated to thermal baths or that have a spa inside the hotel. According to the 2011 Report by Federterme, the Italian enterprises classified as thermal companies are 378, and offer, altogether, 27,867 beds, of which almost 50 % are located in Northern Italy. Veneto is the first Italian region with 85 thermal enterprises, followed by Campania (55) and Tuscany (23). According to the data from ISNART relating to the capacity of accommodation establishments, the thermal municipalities in Italy are 93, with 3,709 facilities in them, of which almost 60 % is made up of complementary businesses (mostly rental houses). For what concerns the number of beds available, campsites and holiday parks offer the largest share (about 10,000).

The accommodation capacity in thermal destinations is about 27,867 beds, of which more than half mainly in 3 and 4 star hotels (Fig. 5.3).

Veneto ranks first among the regions with the highest concentration of accommodation facilities, followed by Tuscany and Campania.

The total volume of business of the thermal industry amounts to 787,964,000 Euros in total revenues (1.7 % more than the previous year), of which 54 % coming from thermal treatments, 35.6 % from accommodation services and 10.2 % from well-being treatments (Federterme 2011).

According to ISTAT data on the movements of tourists in accommodation facilities, the arrivals at thermal facilities were 3,300,000, while the stays amounted to approximately 13,100,000, mostly during the summer months.

Table 5.1 Arrival of foreigners in the Italian regions –year 2012[a]

Region	Arrivals	Stay	Average stay
Veneto	10,230,469	40,387,375	3.9
Lombardy	6,883,106	19,074,599	2.8
Lazio	6,664,244	20,516,459	3.1
Tuscany	6,448,902	22,307,426	3.5
Trentino-Alto Adige	5,190,906	25,722,989	5.0
Emilia-Romagna	2,345,340	9,632,676	4.1
Campania	1,863,347	7,976,125	4.3
Sicily	1,783,117	6,310,821	3.5
Piedmont	1,577,733	5,126,185	3.2
Liguria	1,463,312	4,669,572	3.2
Friuli-Venezia Giulia	1,004,670	4,263,162	4.2
Sardinia	872,115	4,400,649	5.0
Umbria	619,294	2,068,932	3.3
Apulia	578,279	2,286,595	4.0
Marche	366,125	1,854,481	5.1
Aosta Valley	337,626	1,130,915	3.3
Calabria	244,501	1,645,323	6.7
Abruzzo	191,808	1,030,797	5.4
Basilicata	60,599	148,094	2.4
Molise	13,082	41,813	3.2
TOTAL	48,738,575	180,594,988	3.7

Source: Istat Isnart

[a]Data for Lazio and some municipalities of Sardinia have been replicated with the ones from the last available year

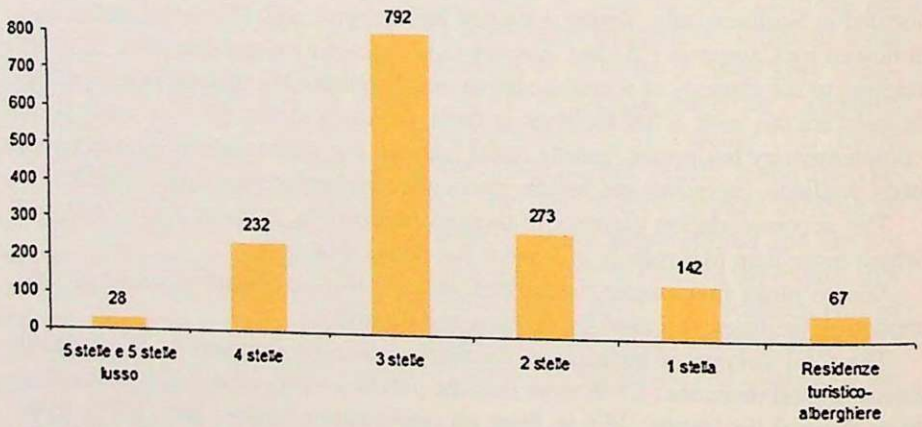


Fig. 5.3 The accommodation capacity. Note: 5 stars and 5 stars superior- 4 starts- 3 stars- 2 stars- one star – tourist residences (Source: ISTAT)

The thermal industry presents quite heterogeneous features that allow for a simple division of the thermal enterprises in different typologies according to the criteria used, such as, for example, the type of mineral water used and the ways in which the water is administered; as a matter of fact, there are some types of mineral water that can be used for hydroponic therapy as well as aerosol therapy.

The person who benefits from thermal facilities is called curista, and goes to thermal baths almost exclusively to undertake certain therapies.

In most cases, the curista is a fairly old person, whose stay is quite long and is highly loyal to both the thermal baths and the surrounding structures and prefers half or full board.

The customers are mainly of Italian nationality, representing over 60 % of arrivals and stay.

Compared to previous years, the overall decline of tourists in Italy, which is a reflection of the international financial crisis, has also affected the thermal industry with a decline of 1.1 % in the arrivals and 1.3 % in the stay (Table 5.2).

If one examines the foreign demand, which represents altogether 3.1 % of the total, the visitors mainly come from Austria, Switzerland and France; among the reasons for choosing thermal resorts, there is the desire to relax, the possibility to take care of one's own body while at the same time enjoying the natural beauty of the location, and the proximity to the city of origin. On average, tourists spend, per capita, 100 Euros for travel arrangements and about 76 Euros for accommodation for their thermal holiday. The data show good sales performances in the accommodation and extra accommodation businesses in the thermal resorts (Tables 5.3 and 5.4).

5.4 The Customers of the Thermal Resorts

The typology of thermal customers is varied. The customers of thermal spa resorts can thus be divided into those attending traditional thermal spas and into wellness customers; their intersection determines the class of the thermal experience.

In the first case the person undergoing the thermal treatment in an establishment is defined as curando (plural curandi), a category which also applies to those who attend wellness centres, however more often, the word used is simply customer. However, in order to draw an identikit of the thermal user, it is fundamental to distinguish the curandi between the residents in the town of the resort and in neighbouring municipalities. This division allows to determine a temporary movement of commuters from curists, that is to say from the curandi who are also tourists as they are boarded in local hosting facilities (either where the thermal resort is located or in the proximity, in order to go to the spa resort). Since many curistas are accompanied by relatives, peers or friends who do not undertake any treatment, it is possible to also identify a large group of tourists who are not curandi.

The second figure is constituted by people who choose the thermal spas not only for health reasons but to combine relax and wellness with other elements, such as culture, food and art, and nature.

Table 5.2 Foreign tourists for type of location

	2011			2012			Change (in percentage)	
Place of tourist interest	Arrivals	Stay	Average stay	Arrivals	Stay	Average stay	Arrivals	Stay
City of historical and artistic interest	21,676,340	59,570,413	2.7	22,007,351	60,291,761	2.7	1.5	1.2
Marine locations	7,794,036	41,237,684	5.3	8,025,204	42,353,805	5.3	3.0	2.7
Lake resorts	4,308,371	21,611,983	5.0	4,451,912	22,685,957	5.1	3.3	5.0
Mountain resorts	3,976,581	19,496,863	4.9	4,246,504	20,584,521	4.8	6.8	5.6
Hill resorts and other areas of interest	1,939,710	8,888,548	4.6	1,970,409	9,044,260	4.6	1.6	1.8
Thermal resorts	1,482,355	5,448,889	3.7	1,498,594	5,517,463	3.7	1.1	1.3
Other resorts	6,283,416	20,219,682	3.2	6,538,601	20,117,221	3.1	4.1	−0.5
TOTAL	47,460,809	176,474,062	3.7	48,738,575	180,594,988	3.7	2.7	2.3

Source: Istat 2013

Table 5.3 Foreign travellers' expenditure – time series

Year	Currency earnings (in million Euros)	Change in percentage
2008	3,090	–0.1
2009	28,856	–7.2
2010	29,257	+1.4
2011	30,891	+5.6
2012	32,056	+3.8
2013	33,064	+3.1
Jan-Feb 2014	3,239	+2.4

Source: Bank of AAVV Turismo internazionale in Italia (2013) Consultazione data: 04.13.2014

Table 5.4 Foreign travellers' per capita daily expenditure

2008	2009	2010	2011	2012	2013
€ 93.67	€ 91.76	€ 93.87	€ 94.38	€ 97.78	€ 102.77

Source: Elaboration on Bank of Italy AAVV Turismo internazionale in Italia (2013) Consultazione data: 04.13.2014

The users of thermal spa resorts base their decision on the advice of friends and family members, or on personal experience or the Internet, the latter used both for information and for purchasing packages. Sports, body care, hiking, shopping and tasting of typical local products are the activities made available to thermal resorts users.

The main users are the elderly (over 60 years), followed by young people aged between 18 and 24, and families with children. The users change during the year: during the January-March period, couples and families are the main customers for this product. The web and the Internet are the main tools used for booking (4 tourists out of 10 have used the web to book their stay at the thermal spa resort).

Among the motivations that drive users to attend a thermal spa, there are major differences between Italian and foreign customers. The main reasons for choosing thermal spas and wellness resorts in Italy are: health and fitness (46 %), spending a relaxing holiday (35 %) in a valuable natural environment (30 %), food and wine (21 %). During their stay, one out of two people visits a spa and wellness centre; 37 % play sports.

However, according to foreign tourists, spa destinations represent the ideal enhanced holiday, which combines relax with sports, the discovery of the territory and food and wine. As a matter of fact, thermal spas are also considered as ideal destinations for sports (1.6 %), which is the first activity performed on site (47.8 %), the discovery of the territory (13.6 %) – and in fact they go hiking (27.1 %) – and to enjoy Italian food and wine (as motivation in 10.7 % of cases and as a tasting activity in 28.8 %).

To sum up, thermal spa destinations host on average 5.4 % of tourists who choose Italy as their holiday destination. Although these figures are quite small if compared to the two-digit numbers of other tourist products such as beach tourism (34.7 %) and cultural tourism (29.9 %), they are on the rise if compared with previous years

Table 5.5 Tourists' behaviour during a holiday in a thermal resort

		Italian tourist	Foreign tourist	Total
Why did I choose it?	Ideal place to relax	41.00	41.30	41.10
	Wellness, beauty farm, fitness	37.20		31.00
But also for...		Exclusive location	Natural beauty of the place	
		For its proximity	Ideal place to practice a sport	
			Desire to visit an unknown location	
			Food and wine	
What did you base your choice on?	Advice/recommendation of friends/family members	36.20	28.20	33.20
	I had already been here/ personal experience	32.20	21.20	28.00
What did you do during your stay?	I went to a wellness centre	43.00	47.20	44.60
	I played sports	40.60	47.80	43.40
	I hiked	23.70	21.20	25.00
But also			Local typical products tasting	
			Shopping	
			I visited historic town centre	
			I visited museums and/or exhibitions	
			I bought typical products and/or local handcrafts	

Source: Italian Tourism Observatory- Unioncamere data 2013

when this tourism accounted for about 4 % (in 2010 and 2011). This positive trend concerns both Italian and foreign tourists (mainly coming from Austria and Switzerland): if in 2010 and 2011, the proportion of Italian did not reach 5 %, in 2012 it reached 6 %; in the case of foreigners, it remained at a steady 3 %, and almost reached 5 % in 2012 (Table 5.5).

5.4.1 Customer Satisfaction

In order to properly manage the image of a place, it is fundamental to understand and analyze how satisfied the typical customer is. To this end, Isart has carried out a study to assess the average rating of users, following their stay.

Table 5.6 Average ratings for the 2012 stay

	Italian tourist	Foreign tourist			
	Italian tourist	European tourist	Non European tourist	Total	Total
Overall tourist offer	7.7	7.9	7.7	7.9	7.8
Destinations/areas	7.7	7.9	7.7	7.9	7.8
Adoption of sustainable measures	8.1	8.3	8.6	8.3	8.2
Atmosphere connected to the environmental identity	8.1	8.1	7.9	8.1	8.1
Courtesy/hospitality of the people	7.9	8.3	7.8	8.3	8.1
Cleanliness	7.7	8.1	7.7	8.1	7.9
Access to the territory	7.8	7.9	8	7.9	7.9
Adherence to the expectations	7.7	7.9	7.4	7.8	7.8
Environmental protection	7.7	7.8	7.6	7.8	7.7
Tourist information	77.4	7.6	7	7.6	7.4
Etc.					
Accommodation facilities	7.8	8.1	7.9	8.1	7.9
Available information in accommodation facilities	8.1	8.3	8.7	8.4	8.2
Measures of environmental sustainability	8	8.4	8.5	8.4	8.1
Valorisation of local identity	8	8.3	7.9	8.3	8.1
Promotion of typical products	7.7	7.9	7	7.9	7.7
Quality-price ratio	7.7	7.7	7.7	7.7	7.7
Accommodation price	7.5	7.8	7.4	7.7	7.6

Source: Italian Tourism Observatory- Unioncamere data 2013

The survey was conducted separating Italian and foreign tourists' ratings (Table 5.6).

On a scale of 1–10, Italian tourists give a score of 7.7 to the overall tourist offer, with peaks of high satisfaction for the accommodation facilities (7.8): tourist information provided inside accommodation facilities gets a rating of 8.1, whereas measures for environmental protection, as well as the valorization of local identity, the hospitality and cleanliness get 8.

Among the positive ratings, environmental protection information to customers and the atmosphere linked to the local identity get a rating of 8.1 (Table 5.7).

Foreign tourists give the overall tourist offer a rating of 7.9. Among the best rated items, there are accommodation facilities (an average 8.1) and catering (8), whose strength is the quality of food and wine (8.4) and the environmental protection information for the customers (8.3).

Table 5.7 Average ratings for the 2012 stay

	Italian tourist	Foreign tourist			
	Italian tourist	European tourist	Non European tourist	Total	Total
Catering	7.7	8.1	7.7	8	7.8
Food quality	8	8.5	7.8	8.3	8.2
Environmental protection information to customers	8.1	8.3	7.8	8.3	8.2
Availability of special menus	8	8.1	7.5	8.3	8.1
Variety of the offer	7.9	8.1	8.3	8.1	8
Promotion of typical products	7.7	8	8.3	8	7.8
Typicality of the offer	7.7	8	7.4	7.9	7.8
Food prices	7.3	7.6	7.2	7.5	7.5

Source: Italian Tourism Observatory – Unioncamere 2013

5.5 Conclusions

Thanks to the data made available through the survey, it is possible to make some considerations. The thermal bath industry is growing, largely thanks to the change of lifestyle and consumers. But in order to take advantage of the full potential of this sector, it is necessary to reconsider the actions of valorization and enhancement of thermal bath destinations. The actions designed to promote the development of the thermal industry need to take into account that the final product is the result of all actions taken on the nine levers of intervention presented in the previous chapter, without none excluded, namely Governance, Communication and Promotion, Channels of sale, Product Offer, Reception, Transport and Infrastructure, Education and training, Investment, and Legal framework. It is also important to consider that the tourist experience is an end to end experience, from the moment the tourist develops a desire to travel to when, upon returning home, he keeps his memories and the desire to return. Therefore, it is essential to consider the overall image of the destination (perceived and designed). This way of conceiving the tourist experience is especially important for the European weekenders, who will visit again if they have a positive experience.

The national thermal spa industry is a circuit still under construction, as the current offer is not very organized under a logic of a growing regional network, and is not currently really included in the main circuits of national and international tourism.

At national level, thermal tourism is still not very relevant, but thanks to the logic of regional system envisaged in the regional development strategies, it can gain visibility and become a significant component of the overall national tourist offer. In view of the historical and cultural importance of this industry at national level and

given the favourable combination of thermal baths and nature, which can be particularly valorised, thermalism may be one of the most significant opportunities for development and growth of the tourist industry and all productive and commercial activities connected.

The existing thermal municipalities are certainly an asset to the local communities, near the thermal area, but it is still necessary to invest heavily in strategies (not just economic) that can transform thermal baths in a source of wealth for the whole region. The local government must provide guidance for all stakeholders: local authorities, Government bodies and economic operators (investors of public-private resources). Such indication of the strategies to apply will favour the adoption of adequate policies for orientation and programming of the economic resources to be allocated in the regional budget. The activities in question must be able to stimulate bottom-up actions and initiatives, that is to say contribute to a system overview in the relevant stakeholders.

As far as integrated development policies are concerned, it is necessary to seek, among the relevant sectors, the right actions that will allow the combination of thermalism and resources such as:

- Natural environment (ecotourism, hiking, bird watching, mountain biking).
- Culture and history (mines, monasteries and shrines, museums, historic buildings and centres, churches, historical parades).
- Sports (horseback riding, golf, alpine skiing, cross country skiing, extreme sports such as paragliding, white water rafting, rock climbing).
- Food and wine (wine roads, oil roads, local flavours, forest products).
- Specialized services where there is a shortage of supply, etc.

In order to develop specific sectors, it is necessary to identify and target segments of the thermal industry that can be attracted by the positive elements of the area, and that should be targeted with a focused strategy.

This identification of the demand segments to target should be carried out in partnership with all relevant stakeholders: thermal spa operators, institutions, and commercial and hotel entrepreneurs, or should at least be verified with them.

Ultimately, the objectives to be pursued in order to develop effective policies for the sector are:

(1) protect and enhance the local identity both in order to build consensus on strategies, and to maintain a well-differentiated thermal sites supply that can be identified as typical; (2) encourage the widest possible participation of associations and local actors in the choices, involving them in the elaboration, decision making and verification processes, to ensure that policies are well understood and individuals can invest in this framework, thus contributing to strengthen it; (3) continue with the qualification of the historic centres while preserving at the same time the historical and cultural heritage, in order to create a very characteristic environment; (4) ensure the effective planning of the landscape, in a way to reflect the sweetness of the densely wooded hills and the majesty of the mountains, avoiding entries that will disrupt the balance built up over centuries; (5) characterize the urban planning as a distinctive sign of the specificity of the regional thermal industry; (6) connect

tour operators and institutions with customers and potential users, through the use of information and communication technologies, such as web television, high speed wifi or satellite systems; (7) encourage the construction of new hotels and hospitality facilities, respecting the environment; (8) improve existing facilities, with targeted interventions; (9) promote qualification and upgrade of category by raising standards; (10) build new conference rooms and promote shared use of existing ones, which can favour the prolonging of the tourist season in thermal resorts by attracting conference flows, but also by providing services to local communities.

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Chapter 6
Quality Management in Spanish Thalassotherapy Centers

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Abstract This article sets forth results from an empirical study to discover the level of implementation and degree of maturity of critical quality factors in Spanish thalassotherapy centers. The aim in doing so was to identify strengths and areas for improvement that will enable Spanish thalassotherapy centers to move towards total quality management (TQM). The method consisted of, first, using descriptive analysis to analyze the level of implementation of critical factors and secondly, applying exploratory factor analysis to validate the scale. The target population comprised 31 thalassotherapy centers out of a total of 44 identified nationwide in 2011. Results indicate that the level of implementation of critical factors is greater than 69 %.

6.1 Introduction

Sea water is a source of health and beauty, a therapeutic and aesthetic resort derived from three factors: salinity, density and movement. All its properties are exploited by thalassotherapy for the cure of diseases, treatment of aesthetic problems and relaxation, so necessary to combat stress in our times. Its application extends to other areas such as analgesics for pain, chronic or acute processes of the musculoskeletal system, for the circulatory and respiratory system, post-operative procedures, trauma and at dermatological and gynecological level. It is also used for relaxation, combating stress, depression, insomnia, fatigue, and in the field of aesthetics to slow aging, sagging and cellulite.

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Thalassotherapy was first used in ancient times and is based on the principle of Hippocrates according to which the sea combats human diseases. It combines sea-bathing with the action of the sun and air as a treatment method for certain physical and psychosomatic diseases (Rocha Ortiz 2004). It does this by using the marine environment (algae, water, mud and other substances that are extracted from it), together with its climate, as agents of therapeutic treatments. The sea climate acts as a stimulant because of its brightness, ionization and the presence of suspended saline substances. It also acts as a sedative due to the temperature, atmospheric pressure and humidity (Rocha Ortiz 2004).

Although the benefits of thalassotherapy are similar to those derived from thermal spas, the main difference lies in that the minerals found in thermal water are extracted from the earth and these waters, by having a higher temperature, can cause a drop in blood pressure and dehydration. Also, the mud used is different, as natural mud is only found in salt water, whereas that used in thermal spas is artificial (Rocha Ortiz 2004).

To achieve the status of a thalassotherapy center certain requirements must be met: be located in a place of marine climate, use living seawater (i.e. with all its organic and inorganic components, among which are microplankton, algae and sea mud), have professional staff with medical supervision and have the infrastructure and equipment needed in order to take advantage of the benefits of the sea. It is very important to avoid altering the living part of the water as it could be influenced when collecting and transporting procedures are performed.

Nowadays it is a developing sector which has been boosted by a combination of social and scientific factors. Thus, the boom in the culture of leisure and health in our society has favored a lot this evolution (Martínez Moure 2008) and represents a type of tourism adapted to the characteristics of the new tourism demand, a participative tourism offering a unique and different product, whose philosophy involves its development in natural, undegraded areas without pollution (Broncos Fernández and Martínez Moure 2006). In this respect, it fulfills the three dimensions of sustainable tourism: (1) social and cultural sustainability, so that its activity does not create tourist pressure, (2) respect for the environment, as it respects the environmental natural resources and (3) it is economically viable, by generating financial resources and job creation (Martínez Moure 2008).

In addition to employment, Thalassotherapy contributes to the creation of infrastructures, income and even improving and restoring the environment of the center, all of which affect the development of the territory. If on top of this we consider that the interest of the population for such activities and treatments is on an increase (Broncos Fernández and Martínez Moure 2006), it is no wonder the interest that its empowerment has.

In this regard, although competition has increased, the sector shows great opportunities thanks to issues such as increasing government aids, a greater leisure culture in our society, an increase in the Senior citizen segment within the population, an age group which has a lot of free time, and the example of the rise in Europe, where the development of these centers is boosted and where there are over a hundred thalassotherapy centers (Broncos Fernández and Martínez Moure 2006).

Although thalassotherapy as a tourism product is in a launch phase, there is the risk of excessive orientation towards the medical instead of the tourist side. It is a product introduced in communication channels, with many creation projects in resort hotels, which has tradition and experience, but also combines modernity, which together with its capacity for customer loyalty can be a great strength for the development of this type of product (Broncos Fernández and Martínez Moure 2006).

Thalasos, in this resurgence process, are aware that in order to survive in a context where they have to compete with other tourism products, should seek customer satisfaction and regard Quality Management as a tool for achieving this, as on the one hand it enables improvement of their internal activities (Sila 2007; Lee et al. 2009; Mak 2011) with the aim of providing a service that satisfies the customer and on the other hand, business performance (Powell 1995; Kaynak 2003). As argued by Magd (2014: 2), in the current environment, quality has become one of the most important strategic instruments to achieve competitiveness, proving to be an effective concept in achieving competitive advantage through customer satisfaction and continuous improvement.

Thus, quality practices or also known as necessary critical factors for successful implementation of Quality Management Systems, have been studied in numerous investigations, conducted mainly in the industrial sector (Saraph et al. 1989; Flynn et al. 1994; Powell 1995; Ahire et al. 1996; Terziovski and Samson 1999; Bayazit 2003; Rad 2005; Conca et al. 2004; Karuppusami and Gandhinathan 2006) subsequently in the service sector (Karapetrovic and Willborn 2001; Sureshchandar et al. 2001; Prajobo 2005) and later in the tourism sector (Keating and Harrington 2003).

However, the Thalassotherapy sector has not been researched in the field of quality management, which on the other hand is necessary due to the boom and importance that health tourism is gaining in today's society and although it is a small niche market, it has great potential for growth compared to traditional tourism.

This work aims to analyze the level of quality development in thalasos, in Spain, in order to subsequently identify a number of strengths and areas for improvement of Quality Management in establishments. The importance of this study is that it enables us to provide managers with relevant information on what their level of quality implementation is.

To respond to this objective, the work has been structured in four parts. First, we present a review of the literature and then we propose the research methodology. In the third part, we perform data analysis and finally in the fourth section we collect the most important conclusions.

6.2 Theoretical Background

As already mentioned, "*as competition increases and continuous change occurs in the business world, Total Quality management [TQM] becomes a prominent approach to management in order to improve general organizational effectiveness and excellence*" (Magd 2014: 2). Regarding this, numerous studies have shown a

positive relationship between TQM implementation and organizational performance in companies (Sun 2000; Tarí and Molina 2002; Bayazit 2003; Rahman and Siddiqui 2006; Joiner 2007; Das et al. 2008; Sila 2007). These improvements in organizational performance lead to improved economic performance, customer satisfaction, employee satisfaction, and social impact (Salaheldin 2009; Kapuge and Smith 2007; Demirbag et al 2006; Tarí and Molina 2002).

Quality practices or critical factors which are implemented in a company when a Quality Management System is set up and which enable all the improvements outlined in the company are defined Kanji (1998), that determines that the critical quality factors are the key areas of the organization, that managed properly ensure improved competitiveness and business excellence. Factors, that together with the tools and techniques that enable us to apply them, must be taken into account for the implementation of Total Quality Management to be successful as demonstrated in the scientific literature (Easton and Jarrell 1998; Claver et al. 1999; Wilkinson et al. 1998; Zhang 2000). This definition gives us an idea of the importance and need to identify these critical factors.

Our starting point for the literature review of the critical factors is the literature on the industrial sector, where the first studies were performed in order to identify critical factors or quality practices, and which serve as a basis for further research carried out in the tourism sector; that focus on how internal business processes are managed by the management with the aim of providing a service that satisfies the customer. The works on the review of the literature in the quality management field in the tourism sector Serrano Bedia et al. (2007), Álvarez García et al. (2014), Tarí et al. (2014) and the work of Santomá and Costa (2007) who collected the major studies in the hotel industry from 1990 to 2007 can be seen.

The first to identify the critical factors of quality were the quality gurus in the professional field like Crosby (1979), Deming (1982), Ishikawa (1985), Juran (1988), Feigenbaum (1991). However, the first empirical research whose objective was to develop and empirically validate an instrument to measure quality practices was conducted by Saraph et al. (1989), who used eight critical factors which he collected from the literature published by gurus. This research was later followed by studies by Flynn et al. (1994), Ahire et al. (1996) and Rao et al. (1999).

Many researchers conducted research in this sense (Powell 1995; Anderson et al. 1995; Leal 1997; Grandzol and Gershon 1998; Quazi et al. 1998; Rao et al. 1998; Easton and Jarrell 1998; Motwani 2001; Sureshchandar et al. 2001; Antony et al. 2002; Conca et al. 2004, among others) and reviewing them, the principles considered in TQM are shown to be different among different researchers and vary in number, not reaching a consensus on what those principles of quality management are.

Several works are highlighted, in which the aim has been to collect the critical factors used in studies conducted in recent years. Sila and Ebrahimpour (2002) examined the critical factors that took into account studies conducted between 1989 and 2000 in different countries and sectors. Along the same line, Claver et al. (2003) also made a group of all those critical factors which appear repeatedly in most research (customer focus, leadership, quality planning, fact-based management, continuous improvement, human resource management (participation of all

members, training, working equipment and communication systems), learning, management processes, cooperation with suppliers, continuous improvement and concern for social and environmental consequences). In a later work, Camisón et al. (2007:2003) regrouped and summarized into ten, the principles used in the most relevant literature on this issue.

They have all grouped the critical factors of Quality Management and although there are differences between them, there are a number of common elements (Ritchie and Dale 2000). In summary, the critical factors are identified; customer focus, continuous improvement, teamwork, management and leadership of senior management, training, process management, participation and involvement of employees, strategic planning, information and analysis, supplier relationships, social responsibility and quality of the results.

Besides all the research discussed, in an attempt to help companies set up TQM, quality models emerged, which are guidelines for the implementation of continuous improvement in the company or to perform self-assessments of their quality practices. We can mention as the main models: the Malcolm Baldrige National Quality Award (USA), the model of the European Foundation for Quality Management (EFQM) and the Deming Award model in Japan.

A more recent study was conducted by Magd (2014), in order to identify the critical factors that are taken into account by the different schools of thought, on the one hand, quality gurus (Juran 1974; Crosby 1979; Deming 1982; Ishikawa 1985), on the other, models of quality awards (Singapore Quality Award, Swedish Quality Award, Fiji Quality Award, Brazil Quality Award, Australian Quality Award, Malcom Baldrige, EFQM amd Rajiv Gandhl) and finally, the results of empirical investigations (Saraph et al. 1989; Al Aanazi 1993; Oakland 1993; Flynn et al. 1994; Badri et al. 1995; Powell 1995; Ahire et al. 1996; Black and Porter 1996; Tamimi 1998; Terziovski and Samson 1999; Ang et al. 2001; Yusof and Aspinwall 2000; Zhang 2000; Lau and Idris 2001; Motwani 2001; Nwabueze 2001; Thiagaragan et al. 2001; Antony et al. 2002; Al Omaim et al. 2005; Baidoun 2003; Bayazit 2003; Chin et al. 2003; Al-Nofal et al. 2004; Conca et al. 2004; Al Nofal et al. 2005; Noviyarsi and Yusof 2005; Rad 2005; Karuppusami and Gandhinathan 2006; Chowdhury et al. 2007; Abdullah et al. 2008; Putri and Yusof 2008; Salaheldin 2009).

The Common TQM Critical Success Factors based on Quality Gurus: Management Leadership; Training, Employees' participation; Process Management; Planning and Quality Measures for Continuous Improvement; Common core of TQM critical factors based on quality award models: Leadership; Strategy and Policy Planning; Information and Analysis; People Management; Process Management; Customer Management Satisfaction; Business Results; Performance and Management of Suppliers/Partners; Impact on Society; Resource Management; and Common TQM Critical Success Factors based on Empirical Research: Top management commitment & Leadership; strategic planning; customer focus and satisfaction; quality information and performance measurement; benchmarking; human resource management; training; employee empowerment and involvement; employee satisfaction; process management; product and service design; supplier management; continuous improvement; and communication.

6.3 Methodology

6.3.1 Sample

The target population of study is formed by thalasos centers found in Spain in 2011. The database has been compiled from information found in the websites of the Spanish Society of Thalassotherapy (SET), the "Bilbilis" Foundation (nonprofit organization dedicated to research and innovation in Medical Hydrology and Balneotherapy, http://fundacionbilbilis.es/home/) and "Yearbook of spas and wellness Spain, Portugal and Andorra" (Tribuna Termal 2010/2011).

The population size is 44 Thalassotherapy centers. The data collection process began May 2 and ended on July 30, 2011, being performed through one or more contacts by email and phone. It was requested that the questionnaire be completed by the Quality Manager or Managing Director of the Thalassotherapy Centre, being considered as the most suitable due to their practical knowledge.

Twenty nine Questionnaires were returned duly completed and two were incomplete, in which case it was requested by mail or phone to be duly completed, which provided us a sample of 31 valid questionnaires which gives us 70.45 % response rate. The sample error is+−9.76 % (95 % Z=1.96 p=q=0.5). Twenty-four questionnaires were completed by the Thalaso Center Managing Director and 7 by the Quality Manager.

Regarding the classification data of the sample, if we analyze it by number of employees, fourteen centers (micro) have 0–9 workers, fifteen 10–49 and two 50–249. Twenty-seven of the centers have associated hotel accommodation (87.1 %), of which 17 are four-star, seven are five-star and three are three-star. Four thalaso centers do not have associated hotel accommodation (12.9 %). Those that do have it associated are classified by number of workers. We observe that seven have 10–49 workers, fifteen 50–249 workers and five 250 or more workers.

If we refer to Quality Management Systems (QMS) in the Thalassotherapy Centre, 24 centers are not certified in any TQM (77.42 %) and seven (22.58 %) are certified in the quality assurance system standard UNE-EN ISO 9001:2008, with four more also having environmental certification UNE-EN ISO 14001:2004. Of the 27 that have associated hotel accommodation, 14 of them are certified in some TQM (51.85 %) and 13 do not have any certification in the accommodation part (48.15 %). The QMS with the highest implementation in the hotel accommodation part associated with thalassotherapy centers is the norm UNE-EN ISO 9001:2008 in seven of them, followed closely by the Q tourist quality standard UNE 182001:2008 Hotels and Tourist Apartments in six, and thirdly the UNE-EN ISO 14001:2004 in five of them.

6.3.2 Questionnaire and Measures

To design the questionnaire, first a literature review was conducted that resulted in the generation of a wide range of items, so that the internal validity of the scale is guaranteed (Saraph et al. 1989; Black and Porter 1995, 1996; Powell 1995; Ahire

et al. 1996; Grandzol and Gershon 1998; EFQM Model 1999). Finally, the format of the scale was determined, by analyzing the various possible formats scale. A 7-point Likert scale for measuring variables in quantitative terms was used.

The instrument for measuring the critical factors was composed of: leadership (10 items), quality policy/planning (9), alliances and resources (9), employee management (11), learning (8), process management (7), continuous improvement (8), and the scale was assessed 1 – not implemented (0 %) 7–100 % implemented. Respondents evaluated the results, customer satisfaction (7), employee satisfaction (9), social impact (8), key results (6), responding to the issues raised, on a scale ranging from 1 – strongly disagree 7 – totally agree.

6.3.3 *Analysis Reliability of the Measurement Scales*

We analyzed the reliability of the measurement scales with which we measured both critical factors and results, which enables to assess whether the proposed scales measure the construct in a consistent and stable manner, and if they are free from systematic and random errors (Sánchez Pérez and Sarabia Sánchez 1999: 367).

By analyzing the item-total correlation in the measurement scales, we find that there are items on some of the scales with item-total correlation below the recommended minimum of 0.3 (Nurosis 1993) which were eliminated (EM11, CI1, CS7) and improved Cronbach's alpha (it evaluates the internal consistency of the scale through the average correlation of each of the variables with the rest of the scale) of the corresponding measurement scales. After purification of the scales, Cronbach's alpha coefficient in all cases reaches values above the minimum required level of 0.7 (Nunnally 1979), and even the majority exceed 0.8 recommended by certain authors (Luque 2000) for confirmatory studies (see Annex).

An essential part of the specification of a scale and its validation is testing its unidimensionality. This feature means that with the set of indicators and elements that form it, there is a single common underlying concept that gives construct binding. To confirm this, an Exploratory Factor Analysis was conducted (with principal components with varimax rotation) that enables to identify the underlying dimensions in each of the constructs, thus becoming the last step to confirm the reliability of the scales.

As a preliminary step to the realization of factor analysis, it is necessary to specify that the data obtained from the questionnaire are adequate to perform the analysis. It requires examining the correlation matrix: (1) we check that in the correlation matrix, among all the variables available, there is a significant number of high correlations (>0.5), and also that the determinant of the correlation matrix takes a value close to zero for all scales; (2) Bartlett Sphericity Test, in our case, we can reject this hypothesis for all the scales because the test value is high and is associated with a significance level lower than 0.05; (3) Measurement adequacy test of Kaiser-Meyer-Olkin (KMO), in our case has values greater than 0.7; (4) The MSA index is unacceptable for values below 0.5; in no case has lower values, most values are greater than 0.7.

The application of factor analysis did not involve the removal of any item. In all cases, the factor loadings are greater than 0.5, not considering factor loadings below 0.3 as significant (Hair et al. 1999). In all scales, the cumulative percentage of explained variance is greater than 50 %.

Thus, from the data obtained in the analysis performed to corroborate reliability, we can conclude that the proposed scales are highly reliable, thus being free from random errors and able to provide consistent results, as well as all the measurement scales being unidimensional.

6.3.4 Data Analysis

The descriptive analysis carried out in order to analyze the level of implementation or degree of maturity of Quality Management in Spanish Thalassotherapy Centers enables us to detect a number of strengths and areas for improvement thereof regarding Quality Management.

It is observed that Leadership (LE) is the best managed factor with an average of 5.73, followed by Learning (L) with an average of 5.60, Quality policy and planning (PO) with 5.47, Alliances and resources (AR) with 4.85 and Employee management (EM) with an average of 5.14, which are those factors with a lower score. The implementation pattern shows an important score considering the scale used, with an implementation level higher than 69 % for all the critical factors analyzed (Table 6.1).

Regarding the results, the one with the highest mean score is Customer Satisfaction (CS), reaching an average of 6.03, and the worst rated is social impact (SI) with a mean score of 4.49, which is still higher than the average level of the seven-point Likert scale used.

Before proceeding with the analysis of critical factors and results separately, we analyze the correlations between the critical factors and the different results (results of customers, employees, social impact and key). For this we analyzed the correlation matrix (Table 6.2).

We note that in all cases there is correlation, but it not significant in the relationship between leadership with key results and social impact. This is also the case for the relationship between learning and social impact. In summary, it is demonstrated that the form of managing the critical factors is related and may influence positively on the results achieved by the company, except for the non-significant relationships that we have observed.

Continuing the analysis, we analyzed each of the items (see Appendix) that form each criteria and quality results, in order to go into the research more in depth and with the aim of finding the strengths and weaknesses of each of the critical factors, in order to improve (Figs. 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, and 6.7).

From the analysis of mean scores obtained for each of the items, we observe which is the main strength and the greatest weakness (Table 6.3):

Table 6.1 Mean and standard deviation of the critical factors and results in Spanish Thalasos

Critical factors		Mean (from 1 to 7)[a]	Standard deviation	% degree of implementation	Results		Mean (from 1 to 7)[b]	Standard deviation
LE	Leadership	5.7355	0.97623	81.94 %	CS	Customer satisfaction	6.0369	0.77193
L	Learning	5.6089	1.14598	80.13 %				
PO	Quality policy/planning	5.4731	1.21614	78.19 %	KR	Key results	5.3172	1.15177
CI	Continuous improvement	5.3427	1.18584	76.32 %	ES	Employee satisfaction	5.0072	1.3593
PM	Process management	5.3088	1.17056	75.84 %				
EM	Employee management	5.1408	1.35265	73.44 %	SI	Social impact	4.4919	1.72117
AR	Alliances and resources	4.8566	1.36089	69.38 %				

Source: Author's

[a]Mean score between 6 and 7 – Strongly implemented; Mean score between 5 and 6 – With an important score; Mean score between 4 and 5 – Average Implementation; Mean score below 4 – Low implementation

[b]Mean score between 6 and 7 – Totally agree; Mean score between 5 and 6 – Strongly agree; Mean score between 4 and 5 – Agree; Mean score below 4 – Indifferent

Table 6.2 Pearson correlation between the elements of quality and results

		Leadership	Quality policy/planning	Alliances and resources	Employee management	Learning	Process management	Continuous improvement
Customer satisfaction	r	0.235**	0.475**	0.658**	0.456**	0.407*	0.573**	0.774**
	Sig.	0.003	0.007	0.000	0.010	0.023	0.001	0.000
Employee satisfaction	r	0.454*	0.579**	0.755**	0.626**	0.458**	0.716**	0.615**
	Sig.	0.010	0.001	0.000	0.000	0.010	0.000	0.000
Social impact	r	0.689	0.334	0.565**	0.365*	0.256	0.732**	0.440*
	Sig.	0.075	0.067	0.001	0.043	0.164	0.000	0.013
Key results	r	0.640	0.663**	0.666**	0.492**	0.416*	0.627**	0.412*
	Sig.	0.087	0.000	0.000	0.005	0.020	0.000	0.021

Source: Author's

r=Pearson correlation; **Correlation is significant at 0.01; *Correlation is significant at 0.05

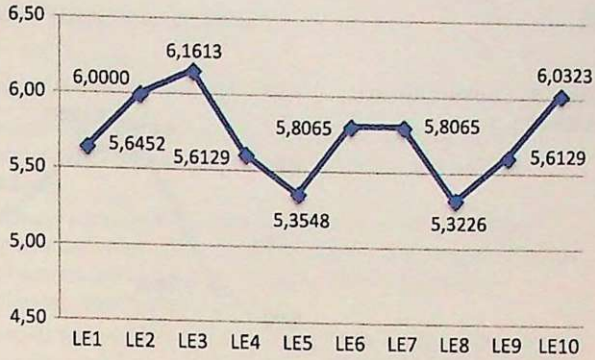

Fig. 6.1 Leadership (Source: Author's)



Fig. 6.2 Quality policy/ planning (Source: Author's)

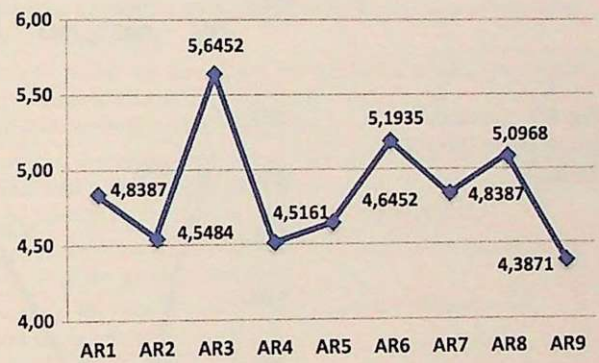

Fig. 6.3 Alliances and resources (Source: Author's)



Fig. 6.4 Employee management (Source: Author's)

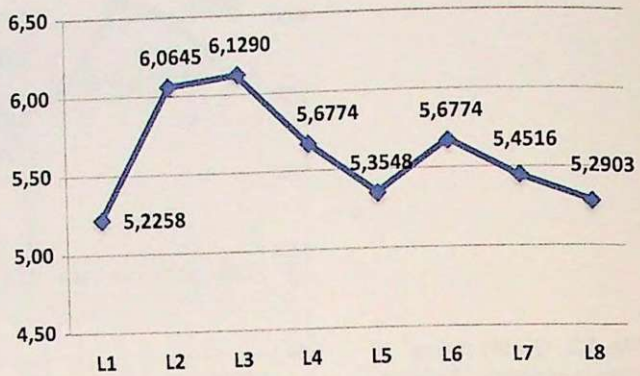

Fig. 6.5 Learning (Source: Author's)

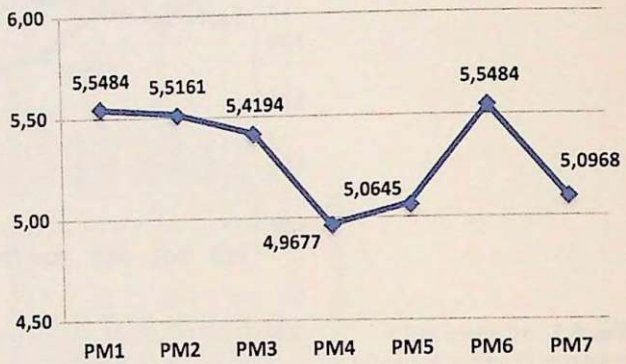

Fig. 6.6 Process management (Source: Author's)



Fig. 6.7 Continuous improvement (Source: Author's)

In the graphs that follow, each result is analyzed separately with its respective items (see Appendix) (Figs. 6.8, 6.9, 6.10, and 6.11).

As with the critical factors, the main strength and greatest weakness, in the case of results is shown in the Table 6.4:

The student-T statistical test was considered in order to check for significant differences in the level of implementation or maturity degree in Quality Management (critical factors and results), depending on whether Thalassotherapy Centers in Spain are certified or not in any QMS. Twenty-four centers are not implemented and

Table 6.3 Weaknesses and strengths in the critical factors

Leadership [a]81.94 %	*Strength:* managers actively communicate to employees their commitment to the process of providing quality service to their customers
	Weakness: administrators keep more contacts with customers, suppliers and other external agents, thereby promoting more active involvement, participation in alliances and development of continuous improvement actions
Learning [a]80.13 %	*Strength:* most employees understand the basic processes used to create the products/services offered and have sufficient knowledge about the basics of the sector
	Weakness: insuring that all employees receive training which helps them to understand how and why the organization performs
Quality policy/ planning [a]79.19 %	*Strength:* the management communicates to all staff its strategy and objectives
	Weakness: communication of company strategy and objectives by management to customers, suppliers and other external agents for them to know them
Continuous improvement [a]76.32 %	*Strength:* managers and supervisors support activities which improve customer satisfaction
	Weakness: the need to implement a program to find the losses of time and costs in all processes
Process management [a]75.84 %	*Strength:* ensuring that the services offered are consistent with previous designs and subsequent developments
	Weakness: Employees involved in different processes do not know how to evaluate them
Employee management [a]7.44 %	*Strength:* people are encouraged and supported to take responsibility and make decisions without risk for the organization, to be involved in improvement activities, team work, etc
	Weakness: the need to improve or implement a transparent system to reward staff achievements and improvements, as well as a system of social benefits such as pension plans, kindergarten, etc
Alliances and resources [a]69.38 %	*Strength:* suppliers are provided with the established requirements (quality) of the goods or services
	Weakness: the need to manage more and better alliances and resources in line with the strategy

Source: Author's
[a]Percentage of implantation

certified in any QMS and seven centers do have some QMS implemented and certified (ISO 9001, ISO14001 standard or both).

The results show that there are significant differences in Quality Policy/Planning, Alliances and Resources, Process Management and Continuous Improvement (sig. 0.029, sig. 0.022, sig. 0.025, sig. 0.014), with no significant difference relating to results. Thalassotherapy centers that have implemented some QMS have higher levels of implementation of quality policy/planning (6.36), Alliances and resources (5.87) Process Management (6.16) and Continuous Improvement (6.28) compared with (5.21, 4.56, 5.05 and 5.06) respectively in centers that do not have any QMS implemented and certified. The differential is greater than 1.10 in all cases, based on the seven-point Likert scale used (Table 6.5).

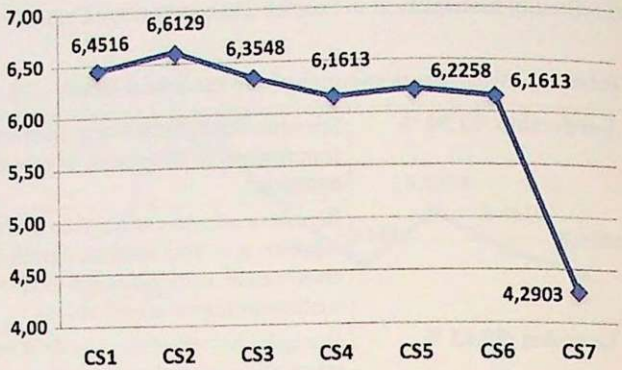

Fig. 6.8 Customer satisfaction (Source: Author's)



Fig. 6.9 Employee satisfaction (Source: Author's)



Fig. 6.10 Social impact (Source: Author's)

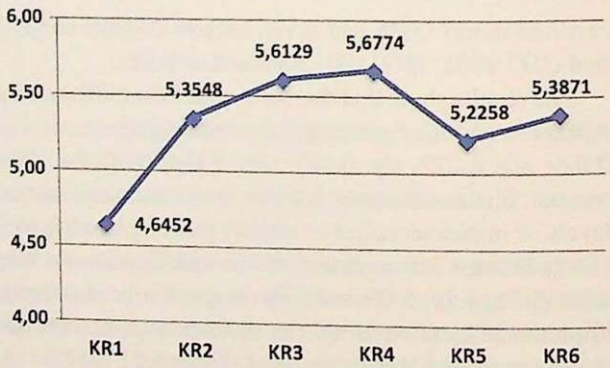

Fig. 6.11 Key results (Source: Author's)

Table 6.4 Strengths and weaknesses in results

Customer satisfaction	*Strength:* customer satisfaction shows improvement over time.
	Weakness: the need for conducting comparative results of clients with those of main competitors, to determine whether the comparison is favorable, providing valuable information, enabling to learn from them.
Key results	*Strength:* objectives in this context are established and the key results achieved fulfill them.
	Weakness: increasing financial results.
Employee satisfaction	*Strength:* employee satisfaction shows improvement over time.
	Weakness: the need to compare employee results with those of main competitors to determine whether the comparison is favorable or otherwise learn from them.
Social impacts	*Strength:* policies to reduce and prevent risks to health and safety are carried out and the company participates in some activities of society.
	Weakness: comparing its results with those of main competitors to determine whether the comparison is favorable or otherwise learn from them.

Source: Author's

Table 6.5 Importance of the critical factors when having or not a QMS certificate in thalasos centers

Critical factor		Certifications	Mean (from 1 to 7)	Standard deviation	Difference
PO	Quality policy/planning	Not	5.2130	1.24330	1.1521
		Yes	6.3651	0.52003	
AR	Alliances and resources	Not	4.5602	1.36377	1.3128
		Yes	5.8730	0.75748	
PM	Process management	Not	5.0595	1.16889	1.1038
		Yes	6.1633	0.71632	
CI	Continuous improvement	Not	5.0677	1.18641	1.2180
		Yes	6.2857	0.54350	

Source: Author's

6.4 Conclusions

Quality has become necessary to be successful in an increasingly competitive market, so today service quality is being used increasingly by many organizations as their main competitive tool, due to the difficulty of being imitated by competing firms. In this research, we have conducted a detailed diagnosis of the implementation level of Quality Management in Spanish Thalasos, which has enabled us to observe which critical quality factors most management and employees of establishments have been more involved with and something we consider very important: What is their perception of improved performance?

The main conclusions of the empirical analysis are:

- Leadership together with learning make up the strengths identified in Spanish thalasos. In this sense, the management is highly involved with quality by showing its employees active commitment to provide quality service and is concerned about providing employees with the skills required to provide the service by following the processes designed by the management. Quality planning together with alliances and resources are the criteria with a lower level of implementation, and therefore are the main areas for improvement.
- Regarding their perception of improved performance, they do show that quality has influenced on an aspect of vital importance for them, which is customer and employee satisfaction. On the other hand, a low concern for social issues was detected, although policies are developed to reduce and prevent risks to health and safety.
- The critical factors of quality are related to the results, which means that good leadership, good quality planning, management of suppliers and employees, as well as management of processes and staff learning policies will have positive effects on the results. So, the form of managing them can positively influence on results on customers, employees, society and key results.

The results of this study have important implications for managing directors of thalasos, as they provide the strengths and areas for improvement in the area of quality, detecting the need for improvement in certain aspects. Specific proposals of actions will be transmitted to managers of Thalasos in a report.

This research has some limitations. The first is derived from the realization of the study and the specific characteristics of the sector object of this study. The generalization of its conclusions should be analyzed with caution and always from a previous analysis of the characteristics of the sector under study. In addition, data were obtained from the perceptions of quality managers or managing directors, which involves the risk of receiving biased responses by a person involved, and therefore interested in the processes to be assessed as objectively as possible. We therefore believe that it would be important to carry out the same study with the response not only from the quality manager, but from different human resources belonging to the company, which would provide different views. A third limitation is related to its cross section, as this work has analyzed the relationship at a precise moment in time.

Finally, with regard to future research proposals aimed at expanding the size of the study: we plan to conduct further research to enable us to analyze each of the critical factors more in depth.

Appendix

Leadership
Personal commitment of the management in the formulation and communication of the mission, vision and values of the company, can clearly be seen
The Management Team of our company encourages change and the implementation of a culture of trust, involvement and support aimed at achieving the best practice

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The Management Team actively communicates to its employees its commitment to the process of providing quality service to its customers
Employees are encouraged to help implement changes in the organization
The Management Team allows employees to make their own decisions
The management team motivates its employees and helps them to fulfill their work at a high level
The Management appreciates the efforts and improvements made by the staff
The Management maintains contacts with customers, suppliers and other external agents and is involved with them in the promotion and participation of alliances and improvement actions
The changes that should be carried out for improvement are identified and boosted by the Management and their effectiveness is reviewed once implemented
Continuous improvement is pursued proactively (in advance) before having to react to conflict or crisis
Quality policy/planning
The management communicates its strategy and objectives to all staff
Strategies and business plans based on the information about customer requirements and business capabilities are developed and implemented.
The management pursues the adequacy of the service policy to meet customer satisfaction, setting realistic goals for all staff (executives, middle managers and employees)
Well-structured and comprehensive planning processes are defined, regularly reviewing and updating business objectives both in the short and long term
Plans are focused towards achieving the best business practices
Staff is involved in setting objectives and plans
Key processes are identified and developed from the business strategies or plans
The management communicates its strategy and objectives to customers, suppliers and other external agents in order for them to know them
The results are evaluated by performing a comparison with those planned, with the aim of improvement
Alliances and resources
There is a close working relationship with suppliers
We strive to establish long-term relationships with suppliers
The suppliers are provided with the necessary requirements (quality) of the goods or services
The management encourages the use of a few suppliers, with quality rather than price as the first selection criterion
Suppliers are actively involved in our development of new products and/or services
A management plan for buildings, equipment and other materials is formulated (form of use, maintenance, insurance, renovations etc.) to improve the overall performance of the organization
Economic and financial resources are assigned and used adequately so as to ensure the success of the strategy
All important information and the knowledge generated is collected and managed, being such information reliable and easy to use by the relevant personnel
In general, management of alliances and resources is carried out according to the strategy
Employee management
Management of human resources in line with the strategy and/or business plans is performed
Employees are trained in problem-solving skills
Employees are trained in teamwork
Experience and training of people is adjusted to current and future needs or specific training plans are developed

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People are encouraged and supported to take responsibility and make decisions without risk for the organization, to be involved in improvement activities, team work, etc.
There is a transparent system to reward staff achievements and improvements, as well as a social benefits system (pension plan, kindergarten … etc.)
Employee performance is measured and recognized in order to motivate them and improve their work performance
Communication between all personnel is ascending, descending and horizontal, so that employees are considered to be well-informed and that their opinions are valued
Staff satisfaction is measured formally and regularly
Improvements in human resource management are introduced by using staff satisfaction surveys, regular meetings with employees, performance analysis, etc.
Safety and/or health practices policies are well-established
Learning
Managers and supervisors ensure that all employees receive training in order to help them understand how and why the organization performs
Most employees of this company have sufficient knowledge about the basics of the sector
Most employees of this organization understand the basic processes used to create our products/services
Availability of resources for staff training within the organization
Managers and supervisors participate in specialized training
Employees receive training to develop their work
Employees receive training to develop teamwork
Top management has established an environment that encourages continuous training
Process management
Control and continuous improvement of key processes
Prevention of defective services is a strong attitude in this organization
The processes used in this organization includes measures to ensure that development of services are consistent with the previous design and subsequent execution (quality measures)
Employees involved in different processes know how to evaluate them
New services in an attempt to access other markets are developed, anticipate the needs of today's market or try to be better than the main competitors
The development of products/services in line with previous designs and later developments is guaranteed
The process design achieves to minimize employee errors
Continuous improvement
Service improvements as a result of customer satisfaction surveys, complaints and claims, etc. are introduced
A program to find losses of time and costs in all processes is implemented
Market research is conducted to understand current and future customer needs and as a result improvements in its products, services and processes are introduced
Areas for improvement are identified
Information is managed to support quality improvement (analysis of business information, cost and financial aspects to support the development of priorities for improvement)
Increase in direct personal contacts of the organization with customers
Use of customer requirements as the basis for quality
Managers and supervisors support activities that improve customer satisfaction

(continued)

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Customer satisfaction
The company is concerned about collecting information from its customers to measure their satisfaction through surveys, complaints etc.
Customer satisfaction shows improvement over time
It has a mechanism to hear and resolve customer complaints
Objectives in this context are established and the customer results achieved meet the objectives
The causes of these customer results are analyzed and improvement plans or actions are implemented
All these customer results cover the most relevant areas of the organization
These customer results are compared with those of the main competitors being such comparative favorable or otherwise learning from them
Employee satisfaction
The company collects relevant information to measure employee satisfaction (surveys, meetings, motivation, training, promotion, etc.)
Other indirect indicators of satisfaction like the level of absenteeism, complaints, involvement in improvement programs, staff turnover, etc. are evaluated
Employee satisfaction shows improvement over time
Absenteeism is low
Staff rotation is low
Objectives in this context are established and the results achieved meet the objectives set by the organization
The causes of these results in people are analyzed and plans or actions for improvement are implemented
These employee results cover the most relevant areas of the organization
These employee results are compared with those of the main competitors being such comparative favorable or otherwise learning from them
Social Impact
Policies to reduce and prevent risks to health and safety are developed
Environmental protection policies are developed
The company participates in many community activities
The feeling the community has is evaluated through surveys, meetings authorities, etc.
The results in society show improvements over time
Objectives in this context are established and the results achieved meet the objectives set by the organization
The causes of these results in society are analyzed and plans or actions for improvement are implemented
These results in society are compared with the company's main competitors, being such comparative favorable or otherwise learning from them
Key results
Our financial results have been excellent
The trends of all key results in the last 3 years are analyzed and show improvement or a high score maintained over time
Both economic and non-economic key results are evaluated, as well as financial and non-financial
Objectives in this context are established and these are met by the key results achieved
The causes of these key results are analyzed and plans or actions for improvement are implemented
All these key results cover the most relevant areas of the organization

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Chapter 7
Motivations for Implementing a System of Quality Management in Spanish Thalassotherapy Centers

José Álvarez García, María de la Cruz del Río Rama, Encarnación González-Vázquez, and José María Merigó Lindahl

Abstract This article presents results from an empirical study of 31 thalassotherapy centers out of the total national number of 44 (as of 2011). The objective was to identify motivations that drive these centers to implement and certify a Quality Management System (QMS). Following a comprehensive theoretical review, the empirical research method consisted of descriptive and factor analyses to determine the importance and structure of motivations. Results show that the key motivations driving thalassotherapy centers to implement a QMS are enhancing service quality, improving processes and procedures, and creating awareness of quality in centers.

7.1 Introduction

Health tourism is defined by the World Tourism Organization (UNWTO) as tourism that aims to achieve "a state of complete physical, mental and social well-being and not merely the absence of illness or disease" (UNWTO). Today, two points of view can be observed; the therapeutic, associated with medical tourism, i.e., aimed at curing and preventing diseases (it includes surgery and/or therapeutic treatment

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according to Smith and Puczko 2014), or the recreational aspect, which makes up what is known as Wellness or well-being tourism, focusing on relaxation, leisure and escape from the routine (Jallad 2000).

Spain has excellent conditions for the development of health tourism, especially tourism that comes to centers whose treatments are based on the properties of water (hydrotherapy, thalassotherapy and spa), as they have a lot of springs with mineral and medicinal properties and 7,880 km of coastline. The main representative of this tourist segment in Spain are spas (Artal Tur et al. 2004), and to a lesser extent thalassotherapy which is in the launch phase. Moreover, within the National Integral Tourism Plan (2012–2015), the health product as a usable resource is included within the territory and can contribute to the promotion and improvement of tourism in Spain, especially international tourism.

This research focuses on thalassotherapy centers, which are facilities where Thalassotherapy is applied and is defined as a prescribed treatment for certain diseases, under medical supervision and qualified personnel, combining marine baths with the action of the sun and air (Rocha Ortiz 2004), with a preventive or curative purpose. All properties of seawater are used to cure diseases and nowadays in the beauty care field and to cure or prevent diseases like stress, depression or fatigue.

At present, it is a developing sector that has been boosted by a combination of social and scientific factors, among which are the increase in leisure and health culture in our society (Martínez Moure 2008), the current trend in today's medicine towards prevention and health education and the interest aroused in administrations and coastal populations derived from its contribution to the development of the territory and the local economy and its traditions, generating income and employment (Martínez Moure 2008).

On the other hand, it is a type of tourism adapted to the characteristics of the new tourism demand, a participative tourism offering a unique and different product, whose philosophy involves its development in undegraded natural areas without any pollution (Brocos Fernández and Martínez Moure 2006). In this respect, it fulfills the three dimensions of sustainable tourism: (1) social and cultural sustainability, so that its activity does not create tourist pressure, (2) respect for the environment, as it respects the natural environmental resources, and (3) is economically viable, generating financial resources and job creation (Martínez Moure 2008).

Thalasos like any company are aware of the need to attract and satisfy customers in order to make profits and survive in today's market, characterized by rapid changes in supply and demand (Casadesús et al. 2010), where customers are increasingly demanding. To achieve customer satisfaction, firstly they must know their needs and secondly, the service requirements, which must be met at the lowest possible cost. Since quality emphasizes on satisfying customer needs, thalasos see in Quality Management a tool for achieving this, as it allows for improvement, on the one hand, of its internal activities (Sila 2007; Lee et al. 2009; Mak 2011) with the aim of providing a service that satisfies the customer and on the other hand, the performance of the company (Hafeez et al. 2006; Yusuf et al. 2007; Salaheldin 2009).

Taking into account that thalassotherapy centers have not been researched within the quality management field, which on the other hand is necessary due to the boom and importance that health tourism is gaining in today's society, and although it is a small niche market, it has great potential for growth compared to traditional tourism. Thus, we consider it important to conduct this study in order to identify the motivations that drive Thalasos to implement a Quality Management System (QMS), since they will be a good predictor of the operational benefits they will receive, as these will be different depending on the motivation behind the thalaso to start an implementation process (Dick 2000).

To respond to these objectives, the paper is divided into several sections. Firstly, the theoretical framework used to conduct research and from the theoretical review the objectives are marked. The second section describes the methods used, while the third gathers the analysis of the results. The main conclusions and implications of the work are presented in the last section.

7.2 Theoretical Background

The review of the literature regarding the motivations that lead companies to implement Quality Management Systems has enabled us to verify that they are related with recognition of quality by their customers, competitors, etc., and internal improvement of the organization leading to improved efficiency, improved control and management of the organization, cost reduction, as well as an increase in customer satisfaction.

The reasons why companies implement and certify Management Systems are classified into various types by international studies, being the most common classification in the literature, those that group these motivations into two groups, internal and external (Weston 1995; Brown et al. 1998; Bryde and Slocock 1998; Singels et al. 2001).

In the same way, Neumayer and Perkins (2005) stress that there are, broadly speaking, two groups of motivations that lead companies to implement such standards and certify them: on the one hand, internal reasons related to efficiency (efficiency motives), that is, performance improvement (performance), productivity and profitability, and, on the other hand, external or institutional reasons (institutional motives), related to the social pressure exerted by various role-players in order to adopt these business management practices.

But this is not the only proposal, Huarng et al. (1999) adds another set of reasons that leads an organization to certify and which are referred to as passive and active reasons. The former ones aim only at obtaining a certificate, while the latter refer to certification as being part of an effort by the entire organization towards total quality. These authors also refer to a third group, which are those related to internationalization in the sense that the ISO 9000 certification opens doors worldwide.

There is no consensus on the conclusions of the major studies conducted in recent years with respect to which are the main reasons that have led companies from different countries to implement ISO 9000 standards, external motivations or internal motivations. Some point out that such motivations (Carlsson and Carlsson 1996; Jones et al. 1997; Martínez Costa et al. 2008), that lead to implement these standards are external. Casadesús et al. (1998) and Martínez Fuentes et al. (2000) agree with this by stating that certification is actually a marketing strategy. However, they suggest that the implementation of the norm always generates an improvement within the organization (Casadesús et al. 1998). Gotzmani and Tsiotras (2002) state that external motivation related to the demands of consumers and certification by competitors are the main reasons that lead an organization to implement and certify the quality system.

Meanwhile, other studies emphasize the influence of internal factors (Boiral and Roy 2007; Casadesús et al. 2010). The study of Nottingham Trent University (1998), conducted with UK companies, state that the ISO 9000 certification involves a more efficient internal process of the organization, and the study shows that external motivations are less important. In this respect, Yahya and Goh (2001) state that companies seeking certification for internal reasons encounter less difficulties to implement the ISO 9000 and in general, achieve more benefits than those that do so for external reasons.

Studies on the reasons leading to implement a quality management system have focused on the industry, a few on services and there aren't any on Thalasos. The results of various studies differ on whether internal or external motivations are more important or influential. However, an important aspect to consider is that many authors argue that the implementation of the ISO standard is the first step towards total quality (Askey and Dale 1994; Bradley 1994; Stephens 1994; Meegan and Taylor 1997; Van Der Wiele et al. 1997; Brown et al. 1998; Kanji 1998; Quazi and Padibjo 1998; McAdam and McKeown 1999), but the reasons they chose to implement it (external or internal) largely define the results obtained by the company with its implementation.

In this respect, Yahya and Goh (2001) state that companies seeking certification for internal reasons, find fewer difficulties to implement the ISO 9000, and in general get more benefits than those that do it for external reasons.

7.3 Methodology

7.3.1 Sample

The target population of study is Thalassotherapy centers in Spain. The database consists of 44 centers and was developed from information contained in the websites: (1) Spanish Society of Thalassotherapy (SET); (2) "Bilbilis"

Foundation (non-profit organization dedicated to research and innovation in Medical Hydrology and Balneotherapy, http://fundacionbilbilis.es/home/), and (3) "Hydrotherapy and Wellness Directory Spain, Portugal and Andorra" (Tribuna Termal 2010/2011).

The data collection process began May 2 and ended on July 30, 2011, being performed by one or more contacts by email and phone. Twenty nine questionnaires were returned duly completed, and two incomplete, in which case the full completion was requested via mail and telephone, which provided a sample of 31 valid questionnaires.

Regarding the sample profile, if we consider the size, measured by number of employees, fourteen centers (micro) have 0–9 workers, fifteen 10–49 workers and two 50–249. Moreover, 27 centers have associated hotel accommodation (87.1 %); seven of these have 10–49 employees, fifteen have 50–249 and five of them 250 or more employees. Four thalaso centers do not have associated (12.9 %) hotel accommodation. If we consider the classification of Spanish hotels by star rating, 17 are four-star, 7 are five-star and 3 are three-star.

If we refer to the Quality Management Systems (QMS) in the Thalassotherapy Centre, 24 of the centers are not certified in any QMS (77.42 %) and seven (22.58 %) are certified in the quality assurance system standard EN ISO 9001:2008 and four more also have the environmental certification standard UNE-EN ISO 14001:2004. Of the 27 that have associated hotel accommodation, 14 of them are certified in a QMS (51.85 %) and 13 do not have any certification in the accommodation part (48.15 %). The QMS with the highest implementation in the hotel accommodation part associated with thalassotherapy centers is the UNE-EN ISO 9001:2008 standard, in seven of them, followed closely by the Q tourist quality standard UNE 182001:2008 Hotels and Tourist Apartments, in six of them and in third place the UNE-EN ISO 14001:2004, in five of them.

In Table 7.1 the technical data of the field work done are shown.

Table 7.1 Technical data of the study

Population universe	Thalassotherapy centers in Spain
Geographical area	Spain
Population	44 centers of Thalassotherapy
Sample size	31 valid questionnaires
Response rate	70.45 %
Sampling error	+−9.76 %
Confidence level	95 % Z=1.96 p=q=0.5
Method of data collection	e-mail and telephone contact
Date of field work	May 2–July 30, 2011

Source: Author's

7.3.2 *Questionnaire and Measures*

To design the questionnaire, we conducted a literature review of studies analyzing the motivations driving companies to implement a QMS and later obtaining certification. The outcome of this review was generating a set of 12 items (Carlsson and Carlsson 1996; Withers and Ebrahimpour 1996; Van Der Wiele et al. 1996; Jones et al. 1997; Brown et al. 1998; Bryde and Slocock 1998; Casadesús et al. 1998, 1999; Lee 1998; Quazi and Padibjo 1998; McAdam and Mckeown 1999; Escanciano 2001; Singels et al. 2001; Yahya and Goh 2001), which we presented in our survey, considering that it is not a single motivation that leads a company to start the implementation process but a combination of several. The repeated use of the items guarantees internal validity; which determines that the questionnaire should be a measuring instrument as reliable as possible, not deforming reality (Lambin 1990:166) and indicates the degree to which the measurement process is free from both systematic error and the random error (Kinnear and Taylor 1995).

Items should be valued by respondents using a 7-point Likert scale (1 – not at all important to 7 – very important). The measurement was performed through the perceptions of the Quality Manager or in his/her absence by the Thalassotherapy Center Manager.

7.4 Data Analysis

To analyze the reasons that lead or may lead Thalassotherapy Centers to implement a QMS, a descriptive analysis was carried out and based on the mean scores obtained (Table 7.2), we can say that improving the quality of services provided is the most

Table 7.2 Descriptive analysis motivations

Motivations	Mean (from 1 to 7)	Standard deviation
(MO9) Improving the quality of services provided	6.7742	0.66881
(MO6) Improving internal processes/procedures	6.6774	0.79108
(MO10) Creating quality awareness in the company	6.5806	0.76482
(MO7) Improving company control and efficiency	6.4839	0.81121
(MO8) Base for Total Quality Management	6.3548	0.55066
(MO1) Strengthening competitive advantage over competitors	5.5161	1.33843
(MO12) Anticipating competitors	5.3871	1.14535
(MO5) Corporate level decision	5.3548	1.35520
(MO11) Belief that certification will give an advantage over competitors	5.2903	1.29598
(MO3) Certified competitors	4.9355	1.50412
(MO2) Customer requirements	4.7419	1.45986
(MO4) Requirement to compete in the sector	4.3871	2.06038

Source: Author's

valued (6.7742), followed by improvement of internal processes/procedures (6.6774) and creating quality awareness in the company (6.5806), as well as improving company control and efficiency (6.4839). Requirement to compete in the sector is the least valued (4.3871), followed by customer requirements (4.7419) and certified competitors (4.9355).

We compare these results with other studies, Buttle (1997), Tang and Kam (1999), Torre et al. (2001), Escanciano et al. (2001), Magd and Curry (2003), Zaramdini (2007) and Cruz Ros (2007), who examined the motivations that lead organizations to implement an insurance system based on the ISO 9000 standard in countries as diverse as the United Kingdom, Hong Kong, Spain, Egypt and United Arab Emirates (Dubai). They all used samples consisting of companies in different sectors (industry, construction and services).

These investigations reached similar conclusions to this study, since they suggest that the most important motivations are to improve the quality of products or services, to improve internal processes and procedures and maintain or increase market share. The order of these variables varies from one study to another. Also, the least important motivations are reducing costs, which is a government policy requirement, customer requirement and competitive pressure. Therefore, we can conclude that the results of this study are consistent with previous findings. In Spain and in the tourism sector Álvarez García et al. (2012) obtained similar results in a study conducted in the hotel accommodation sector, as the one conducted in Spanish Spas (Álvarez García et al. 2013).

Continuing the analysis, the student-T statistical test was proposed in order to check for significant differences in motivations, depending on whether the Thalassotherapy Center has some QMS implemented or not. Twenty-four centers do not have any QMS implemented or certified and seven centers do have some QMS implemented and certified (ISO 9001, ISO14001 standard or both). The results show no significant differences in motivations regarding the existence of a QMS implemented and certified in the Thalassotherapy Center.

In order to comply with the third objective of this research, the exploratory factorial analysis of principle components with varimax rotation on the data is applied, with the aim of grouping the 12 motivations into other variables to replace them, losing as little information as possible. First, we must check whether the exploratory factorial analysis can be carried out by examining the correlation matrix, the Bartlett's Test of sphericity, measure of adequacy of the sample and the KMO index (Table 7.3).

The indicators meet all the minimum requirements. In the correlation matrix we note that there are no variables with low ratios, so therefore we can take all the variables in the analysis into account. In many cases this correlation is greater than 0.5, and to ensure that there is no independent variable, we check that there is at least one p-value lower than 0.05 for each variable. As for Bartlett's Test of Sphericity, it shows that the Chi-square is high and with a level of significance less than 0.05, proving that the variables are not independent of each other and it is appropriate to do the analysis. Regarding the measure of sampling adequacy Kaiser-Meyer-Olkin, it is higher than 0.5 minimum allowed. All parameters analyzed indicate that it is feasible to proceed with factor analysis.

Table 7.3 Indicators of the degree of association between variables and rotated matrix

Indicator		Correlation matrix determinant	Bartlett's Test of Sphericity	Measure of adequacy of the sample	
Scale	Correlation matrix				Index KMO
Motivations	Variables correlated	4.14E-006	311.947 sig. 0.000	(0.570–0.789)	0.623
				Factor 1	**Factor 2**
Item				**External**	**Internal**
(MO1)	Strengthening competitive advantage over competitors			0.872	
(MO2)	Customer requirements			0.763	
(MO3)	Certified competitors			0.720	
(MO4)	Requirement to compete in the sector			0.657	
(MO5)	Corporate level decision			0.762	
(MO6)	Improving internal processes/procedures				0.908
(MO7)	Improving company control and efficiency				0.873
(MO8)	Base for Total Quality Management			0.471	0.625
(MO9)	Improving the quality of services provided				0.901
(MO10)	Creating quality awareness in the company				0.777
(MO11)	Belief that certification will give an advantage over competitors			0.886	
(MO12)	Anticipating competitors			0.704	
Own value				**4.479**	**3.600**
% of variance explained by factor				**37.326 %**	**30.003 %**
Accumulated % of variance explained				**37.326 %**	**67.329 %**
Standardized Cronbach's alpha				**0.868**	

Source: Author's

Continuing the analysis, we rotate the matrix components by the varimax method to facilitate its interpretation, eliminating those factor loadings with a value less than 0.4 minimum considered[1] (Table 7.3). Regarding the variance, it is 67.329 % which exceeds the minimum requirement of 50 %. Cronbach's[2] Alpha which measures the reliability of the scale is greater than 0.8 recommended minimum (0.868). The results enable to identify two factors (Table 7.4).

[1] Though the aim with this method is to minimize the number of significant loadings on each factor, sometimes, there are variables with high loadings on several factors; in these cases, it should be considered when interpreting the factor (Hair et al. 1999:101).

[2] This coefficient assesses the internal consistency of the scale through the correlation of each of the variables with the rest of the scale. The literature widely uses this statistic as a measure of reliability (Nunnally 1979), recommending a statistical value greater than 0.8 (Grande and Abascal 2000). Reliability refers to the degree to which a measure is free from random error, and therefore provides consistent results if measurements are repeated (Sánchez Pérez and Sarabia Sánchez 1999:367), i.e., it evaluates if it generates the same results in successive performed applications for the same individuals, as well as in similar situations (Babbie 1995).

Table 7.4 Factor analysis results

Factor 1: "External Motivations" are constituted by motivations related to obtaining and strengthening competitive advantages, satisfying customer requirements, decisions at corporate level, the existence of certified competitors and anticipating other competitors, as well as industry requirements and laying the foundation for Total Quality Management (TQM)
Factor 2: "Internal Motivations" are constituted by motivations related to the improvement of internal processes and procedures of the Centers, the quality of services, company control and efficiency, as well as creating quality awareness in the company, laying the foundation for Total Quality Management (TQM)

Finally, we want to know which group of motivations is perceived by the Centers as the most important; internal motivations have a greater impact (6.5742) than external motivations (5.0876). These results contradict many studies conducted in the industrial sector, which found that the main reasons that lead companies to implement ISO 9001 are external (Vloeberghs and Bellens 1996; Withers and Ebrahimpour 1996; Casadesús, et al. 1998).

However, these results are consistent with those conducted by Álvarez García et al. (2012) on Hotel Accommodation and Álvarez García et al. (2013) on Spanish Spas, i.e., in the tourism sector and its QMS based on the "Q for Quality[3]" and not on ISO 9001. Tarí and Pereira-Moliner (2012) obtained the same result, having conducted their research on hotels with "Q for Quality" certification and found that the most important motivations for seeking certification are internal, and also considered it very important to pursuit customer satisfaction. Along the same lines, Alonso-Almeida et al. (2012) in a study conducted on hotels with ISO 9001 or Q quality certification, found the same findings.

These results are also consistent with those obtained by Cruz Ros (2007) in a study conducted in the service sector, in which he found that the most important motivations were those denominated internal motives of competitiveness, followed by efficiency or internal management motives. The least regarded motives were those related to external or market issues.

The explanation of the increased importance of internal motives in the tourism sector compared to the results of studies carried out in industrial companies, which attribute greater importance to external motivations, could be supported by the results obtained by Cruz Ros (2007:65), who examined "whether the set of motivations for organizations to implement quality systems is different for those service companies that follow an assurance approach to those which follow a total quality approach." Companies that focus on Total Quality Management (Q for Tourist Quality, intermediate standard between ISO and EFQM Model), have internal and efficiency motives as the most important, predominating the goals established by the management team as the most important motive to carry out implementation.

[3] "Q" of Quality Tourism is a distinction awarded to those establishments that meet the requirements of the Spanish Tourism Quality System (SCTE), which encourages these businesses to achieve full customer satisfaction, the adequacy of services to expectations and optimize the resources available to a greater benefit both for the client and the employer.

In a work conducted by Del Río Rama et al. (2013), in the tourism sector, in particular in the rural accommodation sector with a QMS based on the Q for Quality, the results differ from those obtained in this study. Rural accommodation is mainly certified by external motivations (improving company image, consolidating and increasing market share, etc.), it is also clear that the "Q for Quality" provides them with a better positioning in the market and differentiates them in the sector. These results coincide with those found by studies in the field of ISO 9001, where the companies analyzed were seen to be certified due to external motivations (Jones et al. 1997; Martínez Costa et al. 2008).

The explanation of the increased importance of external reasons in rural accommodation could be due to two facts. On the one hand, due to the small size of the establishments (especially in terms of employees), implying a greater concern for improving their image, increasing market share, etc., rather than for improving internal processes. This could be explained by Rodríguez-Antón et al. (2011), in their research on small hotels certified "Q", in which they tried to corroborate that external reasons are more important than internal reasons in the case of SMEs (Gustafsson et al. 2001). Several authors argue that pressure from customers and competitors is the main motivation for certification for SMEs (Sun and Cheng 2002; Bendell and Boultier 2004; Boiral and Roy 2007). However, these authors in their study could not confirm the relevance of external motivations that appear to be just as operational. Therefore, it is very important to continue research in this line.

On the other hand, the assurance approach followed by rural accommodation when implementing Q for Quality. Cruz Ros (2007: 65) in his research proved that market-related reasons (pressure from competition, customers requirement...) have greater weight in companies that follow quality assurance approaches than in the rest of the companies that follow a total quality approach. This approach is supported by numerous studies like (Rayner and Porter 1991; Brown and Van der Wiele 1995; Shih et al. 1996; Huarng et al. 1999; Beattie and Sohal 1999; Martínez Fuentes et al. 2000).

7.5 Conclusions

Currently, the Thalassotherapy sector in Spain, as in other countries is a developing sector, driven by:

1. Social and cultural changes, such as increased leisure and health culture in our society and the pace of modern life, which involves a high level of stress.
2. Increase in the senior citizen segment.
3. Support from the Public Administration, that has realized its great business opportunity, therefore, in the National Tourism Plan 2015, health appears as one of the key elements to promote and improve Spanish tourism and especially for the development of local economies.

The novelty of this research lies firstly, in the sector where "Health Tourism" is performed and more specifically in the field of Thalassotherapy and secondly, in the approach used, which is quality management. There are no studies in the scientific field which go into depth to know what the reasons are that lead Thalassotherapy centers to implement Quality Management Systems. The analysis of the motives allows us to know the starting point of Thalasos in their process of implementing a QMS and its chances of success, if we consider that the motives largely define the results obtained by the company with its implementation.

The results of the study will enable us to detect whether a change in the motivations of managers is necessary, in order to carry out implementation, if we consider that in the reviewed literature on the subject, we have found three outcomes that deserve special mention:

1. Companies obtain greater benefits if they seek certification for internal reasons. This finding is supported by the results of numerous investigations like Jones et al. (1997), Brown et al. (1998), Singels et al. (2001), Yahya and Goh (2001), Llopis and Tarí (2003). In this sense, Llopis and Tarí (2003) states that generally speaking and with some exceptions, certification for internal reasons allows companies to achieve greater results.
2. Companies that show a greater concern for internal efficiency, implement to a greater extent the critical factors of quality. There are also numerous studies that support this statement, Jones et al. (1997), Martinez et al. (1999), Yahya and Goh (2001), Llopis and Tarí (2003), Álvarez García et al. (2013).
3. Companies that do not have an adequate internal motivation, by implementing a strategy of continuous improvement, can adversely affect the quality of long-term services (Gotzmani and Tsiotras 2002). Moreover, if the motivations that drive them are external, such as image enhancement or customer requirement and competitive pressure, once they obtain certification, the company can end up abandoning the goal of improving the quality of its services (Singels et al. 2001).

The results show that Thalasos want to implement a QMS to improve the quality of services provided, improve internal processes and procedures and improve the control and efficiency of the company, all internal motivations. It is not a single reason that drives thalasos to implement and certify a QMS, but is otherwise a set of reasons, with greater or lesser importance. Moreover, we have found that the internal motivations are the most important.

The data obtained allows us to state that thalasos managers are clear about what motivates them, that the implementation of a QMS will allow for the improvement of their processes and quality of services provided, increased efficiency and greater control of the activities, which will lead them to a greater degree of implementation of the critical quality factors (leadership, process management, employee management, training, quality planning and alliances and resources), improving quality of service, which guarantees satisfaction and compliance with customer expectations and as a direct consequence improved benefits. Thalasos are therefore at the right moment to implement QMS.

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Chapter 8
Barriers to Implementing Quality Management in Spanish Thalassotherapy Centers

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Abstract The objective of this paper was to identify barriers that thalassotherapy centers perceive they must overcome to implement and achieve certification of a Quality Management System. The method used descriptive and factor analyses to determine barriers' importance and structure. It was conducted in 31 out of 44 national thalassotherapy centers according to 2011 records. The empirical study reveals that the most important perceived barriers are reluctance to take on new responsibilities, inadequate knowledge and lack of understanding of quality management, and resistance to change.

8.1 Introduction

The term Thalassotherapy was coined by The Bonnardière in France and is derived from the Greek word "thalássios" meaning ocean and "therapeia" that is healing. It was first used in the mid-nineteenth century by French doctors. However, the Greeks and Romans already knew about the benefits of the sea before that.

We can situate the golden age of Thalassotherapy in the nineteenth century when together with its therapeutic use, there starts to be a demand for it as a tourist destination. The first official regulation emerged in France, in 1997, developed by the International Federation of Thalassotherapie Mer et Santè (created in 1986) with

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quality certification QualiCert, where conditions were established in order to define a center as thalassotherapy, which are: be located in a place of marine climate, use of living sea water (water which contains its organic and inorganic components, among which are microplankton, algae and sea mud), have professional staff with medical supervision and have an infrastructure and equipment needed to apply therapeutic techniques based on seawater.

Currently Thalassotherapy is defined as a prescribed method of treatment for certain diseases, which combines marine baths with the action of the sun and air (Rocha 2004). According to studies, this therapy is beneficial for the proper functioning of the metabolism and seawater has more than 80 elements necessary for the human body, some are antitumor, antibacterial or antiviral. To facilitate absorption of these elements through the skin, mainly iodine and sodium, these should have a similar temperature to the body, between 35° and 37°. It has been found and widely documented that seawater produces stimulating actions in the body and acts as a general tonic. Therefore, this type of therapy is indicated for dermatology, gynecological procedures, musculoskeletal rehabilitation, rheumatology, odontostomatology, for the respiratory system and otolaryngology (Mourelle 2012). It is also applied in post-operative processes, psychosomatic illnesses such as stress, depression or fatigue and in the beauty treatment field.

In the case of Spain, the conditions for the creation of thalassotherapy centers are ideal because it has 7,880 kms of coastline. Moreover, if we consider that tourism is one of the economic motors of the country, it seems reasonable to believe that the sector could have a higher implantation.

For the defense and promotion of this activity, the Spanish Society of Thalassotherapy was created on March 8, 2004 in Isla de la Toja. The criteria admission of members are: immediate proximity to the sea, use of natural seawater, treatments with medical supervision, qualified personnel, compliance with health and safety measures and facilities in good working order. This society, with seven founding members, now has 11 members. In Spain there are currently 37 establishments, the same as those associated with France Thalasso despite there being a lower French coastal perimeter, although they do not all strictly meet the requirements.

The Spanish regulation on thalassotherapy centers could clearly be improved in the absence of a specific regulatory framework for classifying activity centers, in the same way as that for spas that use mineral and medicinal waters. Moreover, this state regulation is outdated, as it goes back to the nineteenth century and is based on the Mining Act. To this, we must add the legislative decentralization, which does not favor the creation of a general legislative framework. Thus, there have been only minor regulatory attempts in Galicia and Murcia.

Despite all this complexity, thalassotherapy centers are undergoing continued expansion within health tourism, which has been favored by the rise of the culture of leisure and health in our society. This type of therapy shows a great potential for meeting new needs like the increase in diseases deriving from occupational and traffic accidents or the demand for rehabilitation therapies. Moreover, in modern

medicine there is a tendency for prevention and health education, which also promotes visiting these centers. To all this, we must add the interest aroused in administrations and coastal populations derived from its contribution to the development of the territory and the local economy and its traditions, generating income and employment (Martínez 2008).

However, the sector is facing new challenges. One may be the risk of experiencing a loss of identity linked to the search by centers of a more recreational rather than medical dimension. Along these lines, it can also be a problem to focus on the young client without pathologies, when the world population is aging. In short, there is a danger of a positioning very much dependent on fashion and social habits.

Furthermore, in this process of resurgence, thalasos are aware that in order to survive in a context in which they have to compete with other tourism products, should seek customer satisfaction and therefore see Quality Management as a tool for achieving this, as it allows for improvement, firstly of its internal activities (Sila 2007; Lee et al.2009; Mak 2011) with the aim of providing a service that satisfies the customer and secondly, the performance of the company (Powell 1995; Kaynak 2003).

There are three reasons for conducting this research: (1) The importance of the tourism sector in Spain, considered as a strategic focus for the economic recovery, according to the National Integral Tourism Plan 2012/2015 (PNIT), which represents 10 % of GDP and 11 % of national employment, and in particular "health tourism is becoming the market segment with the highest growth trend within the tourism industry "(I Tourism and Health Forum Baleares Islands, 2013), being Thalassotherapy Centers a component thereof, according to the classification based on the characteristics of the water used (ANET/ANBAL 2006), (2) thalassotherapy centers have not been the subject of research in the field of quality management, research which on the other hand is necessary due to the boom and importance that health tourism is gaining in today's society because although it is a small niche market, it has great growth potential compared to traditional tourism.

For all the above, the main objective of this work is to detect the barriers that must be overcome by the Centers, both before and during the implementation and certification of a QMS. In this way, the management of the Center would be provided with the required skills in order to develop strategies to manage the barriers properly, reducing or avoiding them before implantation. A secondary objective was to check for significant differences in perceived barriers depending on whether the Thalassotherapy Center has implemented or not some QMS and to analyze the structure of the barriers in this sector.

To respond to these objectives, the paper is divided into several sections. First, the theoretical framework used to conduct research and from the theoretical review the objectives set are marked. The second section describes the methods used, while the third collects the analysis of the results. The main conclusions and implications of the work are presented in the last section.

8.2 Theoretical Background

The literature on the topic reviewed shows that there are many barriers that must be faced by enterprises, which are economic (Reeves and Bernard 1993; Rubach 1995) and organizational (Casadesús and Heras 1999; Martínez et al. 2000; Beer 2003) and make the implementation and / or certification of the quality management system difficult. As a result, many companies did not achieve the expected benefits after the implementation of the QMS, which led to abandoning the system. Studies such as those by Hubiak and O'Donnell (1996) and Guangming et al. (2000) report that approximately two-thirds of organizations have been unsuccessful in their attempt to implement a QMS.

These barriers are common to all organizations, among which are resistance to the necessary cultural change within the company (Kanji 1996 and Holoviak 1995 studied the complexity of the cultural change processes within the company), which is a difficult change and time-consuming and involves a change of attitude in staff and is reflected in new ways of thinking and acting. Furthermore, it is essential to accept the performance of activities necessary for technical quality like assessment to which employees often oppose to.

A second barrier that stands out due to its importance is the need for a very high initial effort by the members of the organization, whose reward is not perceived in the short-term. And finally, lack of management commitment, according to Angeli et al. 1998, is essential to implement successful Quality Management programs. They are often the first barrier to implementation, due to the absence of involvement in the process. For Camisón et al. (2007), the management task consists of a coaching role, focused on encouraging the participation of all members of the organization, educating and helping people to take quality as their priority and do their work as effectively as possible.

According to Tarí (2001, p. 35), some managing directors are reluctant to implement the quality management standards due to the following issues that could arise: "*resistance to change from employees in terms of habits and behaviors; greater workload for managing directors and supervisors which Quality activities involve; lack of time by both management and operational staff to engage in these tasks; excessive paperwork that a more bureaucratic structure can create; the idea that the standard involves a cost and will not generate any benefit in practice; lack of employee training and motivation; the non-existence of a strong commitment from management that only wants to achieve the Quality certificate.*"

Masters (1996, p. 54) conducted an extensive review of the literature and found 15 barriers that are common to all organizations; lack of management commitment, inadequate knowledge or misunderstanding of TQM, inability to change the culture, inappropriate planning, lack of continuity in training and education, lack of skills to build an organization that learns and encourages continuous improvement, incompatible organizational structure and isolated individuals and departments, insufficient resources, inadequate reward system, use of a sealed or inappropriate program to adapt TQM to the organization, ineffective measurement techniques and lack of

access to data and results, short-term approach, paying inadequate attention to internal and external customers, unsuitable conditions for implementing TQM, inappropriate use of empowerment and teamwork.

Tamimi and Sebastianelli (1998) conducted a study to identify the extent to which companies were faced by barriers, identifying 25 potential barriers. Subsequently, Salegna and Facel (2000) identified 16 barriers and Amar and Zain (2002) 11 barriers in manufacturing companies in Indonesia. Jun et al. (2004) investigated the barriers faced by the maquiladora industry in Mexico, identifying 25 potential barriers to success in implementing a QMS and performed a comparison with previous research conducted in U.S. companies.

Later, Bhat and Rajashekhar (2009) in their research aimed at identifying the barriers in the Indian industry. It was based on the literature review, analyzing 21 barriers and compared their results with research conducted in the U.S. by Sebastianelli and Tamimi (2003). Talib et al. (2011a) carried out research in the service sector with the aim of identifying the TQM practices that are fundamental to achieve quality of service and explore barriers to implementation. From a literature review, 12 barriers and 17 practices were raised. In a later work Sebastianelli and Tamimi (2003) noted as the most important barriers: lack of strategic planning and lack of adequate culture supportive of TQM programs.

As for their classification, Dale et al. (1997) put them into five groups: (1) challenges posed by the internal and external environment; (2) management style; (3) policies; (4) organizational structure; (5) management of the change process. Sebastianelli and Tamimi (2003) groups them into five like Bhat and Rajashekhar (2009).

As shown in the studies reviewed, they analyze the barriers to successful implementation in different industries and countries, but not until the research by Talib et al. (2011b) and Raj and Attri (2011) has the aim been to understand the interaction between the barriers. In these investigations, barriers that influence other barriers and dependent barriers ie, that are influenced, have been identified, so they have created a model in which the barriers for the service industry have been ranked. Raj and Attri (2010) also developed an index for each of the barriers to assess the inhibition power of the barriers in the implementation of TQM (Table 8.1).

Table 8.1 Studies on barriers to successful implementation of Quality Management (2000–2012)

References
Salegna and Facel (2000), Martínez et al. (2001), Tarí (2001), Yahya and Goh (2001), Young et al. (2001), Amar and Zain (2002), Al-Zamany et al. (2002), Ljungström and Klefsjö (2002), Van der Wiele and Brown (2002), Beer (2003), Jun et al. (2004), Huq (2005), Mosadegh Rad (2005), Soltani et al. (2005)
Jun et al. (2006), Venkatraman (2007), Helms and Mayo (2008), Bhat and Rajashekhar (2009), Hoonakker et al. (2010), Raj and Attri (2010), Shaari (2010), Abdolshah and Abdolshah (2011), Candido and Santos (2011), Khan (2011), Talib et al. (2011a, b), Raj and Attri (2011), Mosadeghrad (2012), Álvarez et al. (2013), Del Río et al. (2013)

Source: Compiled from the literature review

In summary, managers must learn to cope and manage the resistance to change that usually appears. In this sense, the leaders of the implementation process of the Quality Management System should consider when starting the process, the most common sources of resistance to change, which represent five levels[1] (Rumelt 1995), in such a way that overcoming one level leads to the next level: (1) distorted perception or confusing strategic priorities; (2) low motivation (direct costs of change, past failures, differences of interests between employees and management ...); (3) lack of creative response; (4) policy and cultural barriers (departmental policies, irreconcilable beliefs between groups, rooted values, social dimension of change, implementation climate and relationship between change values and organizational values); (5) other sources of resistance (highly internalized routines, collective action problems, lack of skills or cynicism).

For Rumelt (1995), the main barriers to avoid are the first three, since he considers that the beginning of change is given by the perception of the need for it, so it will be the first barrier to change. This perception must be sufficiently visible by other members of the company. It is generated by its motivation for change by perceiving the need for it, so that the process of change does not become paralyzed, and the last barrier to avoid can be defined as lack of guidance for change due to deficiencies in the analysis of the situation or lack of decision.

8.3 Methodology

8.3.1 Sample

The context chosen to carry out our investigation is the Centers for Thalassotherapy in Spain as components of Health Tourism. The database has been compiled from information contained in the websites of the Spanish Society of Thalassotherapy (SET), the "Bilbilis" Foundation (non-profit organization dedicated to research and innovation in Medical Hydrology and Balneotherapy, http://fundacionbilbilis.es/home/) and "Yearbook of spas and wellness Spain, Portugal and Andorra" (Tribuna Termal 2010/2011) and was finally constituted by 44 centers.

The data collection process began May 2 and ended July 30, 2011, being performed through one or more contacts by email and phone. 29 questionnaires were returned duly completed, and two incomplete, in which case full completion thereof was requested via mail and telephone, which provided a sample of 31 valid questionnaires representing a response rate of 70.45 % and a sampling error of +−9.76 % (95 % $Z=1.96$ $p=q=0.5$). Twenty-four questionnaires were filled out by the Thalaso Center Managing Director and seven by the Quality Manager.

Regarding the classification data of the sample, if we analyze it by number of employees, fourteen centers (micro) have 0–9 workers, fifteen 10–49 and two 50–249. Twenty-seven centers have associated hotel accommodation (87.1 %), of which

[1] Model of Sources of Resistance to Change or Inertia proposed by Rumelt (1995).

seventeen are four-star, seven are five-star and three are three-star. Four thalaso centers do not have associated (12.9 %) hotel accommodation. Those that do have it associated, are classified by number of workers. We note seven have 10-49 workers, fifteen 50–249 and five have 250 or more workers.

If we refer to Quality Management Systems (QMS) in the Thalassotherapy Center, twenty-four centers are not certified in any QMS (77.42 %) and seven (22.58 %) are certified in the quality assurance system standard EN ISO 9001:2008, with four more also having environmental certification UNE-EN ISO 14001:2004. Of the twenty-seven that have associated hotel accommodation, fourteen of them are certified in some SGC (51.85 %) and thirteen of them do not have any certification in the accommodation part (48.15 %). The QMS with the highest implementation in the hotel accommodation part associated with thalassotherapy centers is the norm UNE-EN ISO 9001:2008 in seven of them, followed closely by the Q tourist quality standard UNE 182001:2008 Hotels and Tourist Apartments in six, and in third place the UNE-EN ISO 14001:2004 in five.

8.3.2 Questionnaire and Measures

To design the questionnaire, we conducted a literature review of studies analyzing the barriers that companies must overcome throughout the QMS implementation process: Deming 1982; Laza and Wheaton 1990; Gopalakrishnan and Mcintyre 1992; Froiland 1993; Pehrson 1994; Hyde 1994; Stevens 1993; Reeves and Bernard 1993; Rubach 1995; Goodman et al. 1994; Hayes and Pisano 1994; Whalen and Rahim 1994; Zetie et al. 1994; Rand 1994; Weller and Hartley 1994; Wernick 1994; Whalen and Rahim 1994; Fram and Camp 1995; Rubach 1995; Kanji 1996; Van der Wiele and Brown 2002; Young et al. 2001; Beer 2003. This review enabled us to consider a group of 16 barriers. Repeated use of the items guarantees internal validity, which determines that the questionnaire should be a measuring instrument as accurate as possible, that does not deform reality (Lambin 1990, p. 166) and it indicates the degree to which the process of measurement is free from both systematic error and random error (Kinnear and Taylor 1995).

The measurement was performed through the perceptions of the Quality Manager or in his/her absence by the Thalassotherapy Center Manager, who assessed the barriers using a 7-point Likert scale (1 – not at all important to 7 – very important).

8.4 Data Analysis

The descriptive analysis carried out shows that thalaso center managers perceive that the most important barriers to be found in the process of implementation and certification of a QMS are resistance to assume new responsibilities followed consecutively by inadequate knowledge and lack of understanding of quality management, resistance to change and lack of time to devote to quality jobs.

Table 8.2 Descriptive analysis barriers

Barriers	Mean (from 1 to 7)	Standard deviation
(BA13) Resistance to assume new responsibilities	4.1935	2.12005
(BA2) Inadequate knowledge and misunderstanding of Quality Management	4.0323	2.10529
(BA12) Resistance to change	3.9677	2.16770
(BA10) Lack of time to dedicate to quality tasks	3.9032	2.46786
(BA15) Business Culture	3.8387	2.08322
(BA6) Insufficient resources	3.8065	2.12005
(BA3) Lack of skills to change organizational culture	3.6774	1.95597
(BA7) Ineffective measurement techniques and lack of access to data and results	3.6452	1.94162
(BA11) Lack of employee participation	3.6129	2.21626
(BA8) Short-term approach	3.6129	1.96091
(BA9) Inappropriate conditions to implement the Quality Management Model	3.5484	2.27799
(BA16) Absence of external advisors	3.5161	2.36461
(BA14) Not achieving the expected benefits	3.5161	2.23414
(BA5) Lack of skills to build an organization that learns and encourages continuous improvement	3.3871	2.09249
(BA4) Inappropriate planning	3.3548	1.83573
(BA1) Lack of management commitment	3.3226	1.92158

Source: Author's

Whereas lack of management commitment, inadequate planning and lack of skills to build an organization that learns and encourages continuous improvement have been considered the least important (Table 8.2).

By the average obtained in all cases and considering that we used a 7-point Likert scale, in general we can say that the barriers examined were considered unimportant by most centers. To determine the internal consistency of the scale, ie, the reliability of the measurement instrument, we calculated Cronbach's Alpha coefficient, whose value is 0.972 which allows us to state that the scales are reliable.[2]

The results of this study show some similarities to research conducted in recent years in the industrial sector (in tourism there is little research), such as: Masters (1996) and Adebanjo and Kehoe (1998) in the UK industry; Sebastianelli and Tamimi (1998) 188 U.S. industries; Salegna and Facel (2000) 109 U.S. industries; Amar and Zain (2002) in 78 companies in Indonesia, Jun et al. (2004) in 43 industries in

[2]This coefficient assesses the internal consistency of the scale through the correlation of each of the variables with the rest of the scale. The literature widely uses this statistic as a measure of reliability (Nunnally 1979), recommending a statistical value greater than 0.8 (Grande y Abascal 2000). Reliability refers to the degree to which a measure is free from random error and therefore provides consistent results if measurements are repeated (Sánchez and Sarabia 1999, p. 367), ie. it evaluates if it generates the same results in successive applications for the same individuals, as well as in similar situations (Babbie 1995).

Mexico and Talib et al. (2011a) in 12 service companies in India. In these studies the order of the barriers varies from each other.

Along the same lines, in the literature review conducted by Masters (1996), the main obstacles stated are lack of management commitment, weak understanding of quality management, inability to change organizational cultures, lack of foresight in planning, lack of continuous training and education, and finally lack of resources. In the study by Salegna and Facel (2000), the results showed three major obstacles; lack of time to devote to quality tasks, poor communication and lack of delegating responsibility to employees. In a more recent study by Subrahmanya and Rajashekhar (2009), in industries in India, it was found that the main obstacles to successful implementation were resistance to change from employees and lack of financial resources.

In Spain, the study conducted by Tarí (2001), in 44 ISO certified companies, in which the response was from quality managers of the companies analyzed, shows that lack of time to devote to quality tasks, lack of participation and employee qualifications, resistance to change and resistance to new responsibilities are the major barriers, while the obstacles with less influence are the absence of external advisors, collaboration with customers and lack of existing training programs in the market. Martínez et al. 2000, in his work carried out in 77 Spanish ISO 9000 certified companies, grouped the barriers into two groups. The first group was related to economic barriers and the second group refers to the existence of certain organizational aspects that may hinder the implementation and / or certification. The major barriers detected were those related to organizational issues; resistance to new responsibilities, lack of involvement of the employees and management team, difficulties of cooperation and difficulties in communication of the tasks and functions for each job.

If we compare with the studies in the tourism sector, the similarities are even greater. Álvarez et al. (2011) conducted their study in 29 of the 33 spas certified with the Q Tourism Quality (QMS), finding that the most important barriers faced by Spanish spas were mainly lack of time to devote to quality tasks, resistance to change and assuming new responsibilities by employees. In a subsequent study, Del Río et al. (2013) in the rural housing sector, the most important barriers found were lack of time to devote to quality tasks, not achieving the expected benefits and insufficient resources. In another study, conducted in the hotel sector by Álvarez et al. (2013), the results show that the most important barriers that companies faced were mainly lack of time to devote to quality tasks, resistance to change and to assuming new responsibilities by employees.

The results of this study together with those obtained by research in the tourism sector, show that the most prominent difference with regard to those whose study population are industrial companies, is that in the tourism sector, lack of management commitment is the least valued barrier analyzed, unlike the industrial sector where lack of management support and management commitment are the most common obstacles. So, we can conclude that the results of this study are consistent with previous findings in the tourism sector.

Continuing the analysis, the student-T statistical test was proposed in order to check for significant differences in perceived barriers depending on whether the Thalassotherapy Center has a QMS implemented or not. Twenty-four centers have not implemented nor are certified in any QMS and seven centers do have some QMS

implemented and certified (ISO 9001, ISO14001 standard or both). Significant differences were found in ten of the analyzed barriers (BA3, sig 0.001, BA4, sig 0.005, BA5, sig 0.002, BA7, sig 0.004, BA8, sig 0.021; BA9, sig 0.008, BA10, sig 0.029; BA13, sig 0.005, BA14, sig 0.023; BA15, sig 0.022). The centers that do not any QMS implemented or certified have a greater perception of the barriers analyzed with significant differences than those with some QMS.

In order to comply with the third objective of this research, the factorial exploratory analysis of principal components with varimax rotation on the data is applied, with the aim of grouping the 16 barriers found in other research, and to replace them with the least possible loss of information. First, you must check if the factorial exploratory analysis can be carried out by examining the correlation matrix (Table 8.3). The indicators meet all the minimum requirements.

Table 8.3 Indicators of the degree of association between variables and rotated matrix

Indicator	Correlation	Correlation matrix	Bartlett's test	Measure of adequacy	Index
Scale	matrix	determinant	of sphericity	of the sample	KMO
Barriers	Variables correlated	3.78E-015	791.458 sig. 0.000	(0.520–0.661)	0.726

Item		**Factor 1 organizational**	**Factor 2 economic and human**
(BA1)	Lack of management commitment	0.549	
(BA2)	Inadequate knowledge and misunderstanding of Quality Management	0.831	
(BA3)	Lack of skills to change organizational culture	0.872	
(BA4)	Inappropriate planning	0.917	
(BA5)	Lack of skills to build an organization that learns and encourages continuous improvement	0.873	
(BA6)	Insufficient resources		0.910
(BA7)	Ineffective measurement techniques and lack of access to data and results	0.675	0.617
(BA8)	Short-term approach	0.555	0.689
(BA9)	Inappropriate conditions to implement the Quality Management Model	0.643	0.665
(BA10)	Lack of time to dedicate to quality tasks	0.517	0.768
(BA11)	Lack of employee participation		0.801
(BA12)	Resistance to change	0.682	
(BA13)	Resistance to assume new responsibilities	0.702	0.638
(BA14)	Not achieving the expected benefits		0.842
(BA15)	Business culture	0.714	0.614
(BA16)	Absence of external advisors	0.494	0.766
Own value		**6,835**	**6.066**
% of variance explained by factor		**42.716 %**	**37.910 %**
Accumulated % of variance explained		**42.716 %**	**80.626 %**
Standardized Cronbach's alpha		**0.916**	

Source: Author's

Table 8.4 Factor analysis results

Factor 1: "*Organizational barriers*" constituted by barriers related with inappropriate planning, lack of skills to build an organization that learns and encourages continuous improvement, lack of skills to change organizational culture, inadequate knowledge and misunderstanding of Quality Management, business culture, resistance to assume new responsibilities, ineffective measurement techniques and lack of access to data and results, lack of management commitment, inappropriate conditions to implement a Quality Management Model
Factor 2: "*Economic and human barriers*" constituted by barriers related with insufficient resources, not achieving the expected benefits, lack of employee participation, lack of time to dedicate to quality tasks, absence of external advisors, short-term approach and inappropriate conditions to implement a Quality Management Model, as well as, lack of skills to change the organizational culture, resistance to assume new responsibilities, business culture, ineffective measurement techniques

Source: Author's

Continuing the analysis, we rotate the matrix components by the varimax method to facilitate interpretation, eliminating those factor loadings with a value less than 0.4 minimum considered[3] (Table 8.3). Regarding the variance, it is 80.626 %, which exceeds the minimum requirement of 50 %. Cronbach's Alpha which measures the reliability of the scale is greater than 0.8 recommended minimum (0.973). The results obtained allow us to identify two factors. Finally, we want to know which is the most important group of perceived barriers by the Centers; economic and human barriers have less impact (3.6452) than organizational barriers (3.7133) (Table 8.4).

8.5 Conclusions

The novelty of the study is that it takes place in Thalassotherapy Centers, a sector where there is no study in the field of quality management. The results enable us to know and understand the barriers that may hinder the process of implementing a QMS in these establishments. This information is very important for managing directors, who before starting the implementation and certification process, can implement all the necessary actions to eliminate or minimize these barriers, achieving greater efficiency in the implementation process, and thus increase their chances of success.

The research results show that quality managers or managing directors of Talasos perceive that the major barriers they have to face are resistance to assume new responsibilities followed consecutively by inadequate knowledge and lack of understanding of quality management, resistance to change and lack of time to devote to quality tasks. This study has important implications for Talasos Centers that wish to

[3]Though the aim with this method is to minimize the number of significant loads on each factor, sometimes there are variables with high loads on several factors; in these cases they should be taken into account when interpreting the factor (Hair et al. 1999, p. 101).

implement a quality management system, as it gives information about the barriers they have to overcome, which puts managers in a better position to anticipate and resolve problems that may arise in the future.

Finally, in the analysis of the structure of the barriers found, we saw that these are grouped either into "organizational barriers" which refer to the existence of certain organizational aspects that may hinder the implementation or certification of the Quality Management System or into "Economic and human barriers", which refer to the lack of financial, material and time resources. The latter as opposed to the former are less important.

This research has some limitations. The first is derived from the realization of the study and the specific characteristics of the subsector analyzed "Thalassotherapy centers". The generalization of its conclusions should be analyzed with caution and always from a previous analysis of the characteristics of the sector that is to be studied. In addition, data were obtained from the perceptions of quality managers, which involves the risk of receiving biased responses by a person involved, and therefore interested in the processes to be assessed as objectively as possible. We therefore believe that it would be important to carry out the same study with the response not only from the quality manager, but from different human resources belonging to the company, which would provide different views. A third limitation is related to its cross section, as this work has analyzed the relationship at a precise moment in time.

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Chapter 9
Social Program Hydrotherapy IMSERSO in Horizon 2020

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Abstract A major concern in developed societies is elder people's quality of life. In general, today's demographic situation implies an increase in life expectancy and quality. Such a scenario can be summarized by the following expression: achieving wellness by feeling good. In this context, hydrotherapy acquires special importance. This chapter outlines a program sponsored by IMSERSO: the IMSERSO Social Cures Program. The goal of this paper is to analyze future trends (i.e., over the next decade) in such programs across Spain, based on estimations of elderly population size. The key contribution of this paper is calculating a ratio to examine and analyze the number of seniors in each seat in the program. The goal of this research is to calculate the number of available spaces if the program is sufficient or, in light of steady and progressive elderly population growth in Spain, if any social demand would remain uncovered.

9.1 Introduction

In recent decades there has been a clear increase of the elderly population in Spain (just as in other European societies). Arising from this demographic situation we find that one of the main concerns of advanced societies is to ensure the quality of life of older people. And the term "quality of life" is necessarily associated with wellbeing.

In this context, spa treatments take on a special role, since there is scientific evidence of the importance they have for water users to acquire a full sense of wellbeing. The arguments supporting this sense of improvement in spa users agree with the points raised by Saz Peiró and Tejero Lainez (1987), which state: "the spa is the place where people gather to talk about health and not illnesses, where people, on

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their days off, can become aware of their physical and mental potential and steer it towards creative health."

Hernández Torres (2006: 19), in the same line, identifies the following benefits of hydrotherapy:

- " natural and non-aggressive therapy, well accepted by gerontological groups"
- "decrease in the consumption of medicines"
- "low bed/treatment cost"
- "relieves pressure on Health Centres and hospitals"
- "healthcare decentralization. Introduction of healthcare to rural areas"
- "equity, effectiveness and efficiency of the system"
- "honest and obvious improvement"
- "potentiality in the health education of certain population groups"

The second factor raised by Hernandez Torres, the decrease in the consumption of medicines becomes particularly important when discussing the elderly, since this is a stage of life characterised in many cases, by polypharmacy-which for authors like Altuzarra Martínez (1997) is partly a result of the inherent characteristics of the health system. Edis' book (1989) is already a reference, which shows the relationship between the elderly and consumption of medicines. Taking this factor into consideration in hydrotherapy, it should be noted that there are many publications which highlight the scientific evidence that after a spa treatment, the elderly stop using so many old medicines, reduce polypharmacy.

Furthermore, the IMERSO Social Hydrotherapy program currently enjoys a high impression for the interest aroused not only among the user population, but also among the medical profession. We agree with Hernández Torres (2006: 15) when he says "The growing interest raised by treatments based on Medical Hydrology (balneotherapy, spa therapy) and hydrotherapy, as well as increasing the private demand for this type of treatment has stimulated initiatives like that which IMSERSO has been carrying out for years through the Social Hydrotherapy Program, through which, at reduced prices and with a prior medical report it provides various treatments to pensioners, which are given in spas and that are made up of: a medical examination on admission to them, basic hydrotherapy treatment which, in each case, the spa doctor prescribes together with continuous medical monitoring, with the issuance of a final report to their family doctor."

There are many publications that highlight the importance and the benefits that hydrotherapy has in the elderly (both physically and mentally). Contributions in this line by Armijo Valenzuela or Hernandez Torres are now classic. Foreign publications on this same subject line are also classics, among which the work of Dauverchain or Hessel, among others occupy a special place.

Thus, through these pages we will specifically focus on this IMSERSO sponsored program that facilitates spa therapy to elderly people who need it by medical prescription. There are many scientific publications that have dealt with and examined this program from various disciplines (e.g., from the Gerontogy Clinic or from Preventive Gerontology).

For a complete description of the program (specifically its general characteristics and recent developments) we refer the reader to two very current publications: "El

Programa de Termalismo Social del IMSERSO. Evolución y tendencias de futuro" (Martínez Moure, O.; Saz Peiró, P. y Ortiz Lucas, M.) and "Programa de Termalismo Social del IMSERSO en Galicia y Aragón (España). Evolución reciente de plazas y balnearios", by the same aforementioned authors. Armijo Valenzuela (1964, 1981, 1989, 1991, 1994), Dauverchain (1989), Hernández Torres (1988, 1993), Hessel et al. (1986). Examples of recent literature on this topic are Del Río Rama et al. (2014), Saz Peiró et al. (2011) and Martínez Moure (2013).

Although the article presented here is essentially numerical, quantitative, we would like to offer in this introductory section a brief historical outline on the use of medicinal sources. In fact, the IMSERSO Social Hydrotherapy program, subject of this article, falls within the wide use of spas, bathhouses and thermal sources, a practice that has ancestral roots. Many of these traditional sources (and of eminently popular use) have been forgotten, losing wonderful natural resources to cure numerous ailments. We can take as an example of this reality a spring located in Galicia (although there are many more examples).

This spring (which has no name) is located in an enclave called "A Mosa" in the City Council of Ferreira de Panton-where there is already another spa that is well-known for the healing properties of its famous waters. The chemical properties of the spring located in "A Mosa" have not been studied, but neighbours say that, from time immemorial, they have been used by the natives of the area to cure various ailments. This spring is also found in a very beautiful place, in a superb natural setting. It would be possible to give it tourist value, also generating important economic inputs, and contributing to local and regional development of the area. For this reason, there are many works that study and analyze the quality of the tourism sector.

9.2 Objectives

In this paper we aim to anticipate what will be the trend in the next decade of the capacity by Autonomous Communities for this program in Spain to interpret, thereupon the elderly population that is estimated will exist in those years. Finally, the final point our analysis is the calculation of a ratio, which allows us to analyze how many elderly people there for each space in the program. The final objective of our research is to calculate if the number of spaces on the program is sufficient or (taking into account the steady and progressive increase of the elderly in Spain and the important benefits hydrotherapy has for the elderly) if any social demand would not be covered.

9.3 Methodology

This study is planned as a sequel to an analysis of the IMSERSO Social Hydrotherapy Program covered in the Aposta Digital Magazine.

His research responds to a quantitative approach is supported by an extensive review of the literature on the subject.

In a more specific way, it can be said that the study proposed here is prospective and longitudinal (prospective because our work's final aim is to analyze the expected amount of places for the years to come). In this case, the study is performed using a regression.

The ratios were calculated by starting with the following generic formula:

$$\text{Variation Spaces}(\%) = \frac{\text{Spaces allocated year y} \quad \text{Spaces allocated year x} \cdot 100}{\text{Spaces allocated year x}}$$

9.4 Data

We begin the analysis of the IMSERSO Social Hydrotherapy Program with Table No. 1, where the number of places allocated to the program for the years 2010, 2011, 2012, 2013 and 2014 (for the Spanish Autonomous Communities) are represented.

With the data provided by IMSERSO on places on the IMSERSO Social Hydrotherapy Program assigned to each of the Spanish Autonomous Communities we can calculate the percentage changes with respect to 2010. The final aim is to analyze how the assignment of places has changed since the year which we take as the base year (2010) to the current year (2014).

Calculations are carried using the following formulas:

$$\text{Variation Spaces}(\%) = \frac{\text{Spaces allocated year y} - \text{Spaces allocated year x} \cdot 100}{\text{Spaces allocated year x}}$$

$$\text{Variation Spaces}(\%) = \frac{\text{Spaces allocated year 2011} - \text{Spaces allocated year 2010} \cdot 100}{\text{Spaces allocated year 2010}}$$

$$\text{Variation Spaces}(\%) = \frac{\text{Spaces allocated year 2012} - \text{Spaces allocated year 2010} \cdot 100}{\text{Spaces allocated year 2010}}$$

$$\text{Variation Spaces}(\%) = \frac{\text{Spaces allocated year 2013} - \text{Spaces allocated year 2010} \cdot 100}{\text{Spaces allocated year 2010}}$$

$$\text{Variation Spaces}(\%) = \frac{\text{Spaces allocated year 2014} - \text{Spaces allocated year 2010} \cdot 100}{\text{Spaces allocated year 2010}}$$

9.5 Results: Calculation of Year to Year Variations

Below we show the results of year to year variations (2010–2011; 2010–2012; 2010–2013 and 2010–2014) in the places assigned to the IMSERSO Social Hydrotherapy Program, firstly the numerical values are shown (Table 9.1) and a secondly graphically (Fig. 9.1).

Table 9.1 Year to year variation of the spaces of the IMSERSO Social Hydrotherapy Program (2010–2011, 2010–2012, 2010–2013, 2010–2014)

Autonomous community	Variation 2010–2011 (%)	Variation 2010–2012 (%)	Variation 2010–2013 (%)	Variation 2010–2014 (%)
ANDALUCIA	−4.1	−5.8	−14.2	−14.0
ARAGON	−4.1	−23.3	−30.2	−27.7
ASTURIAS	−4.1	−21	−28.1	−24.9
CANTABRIA	−4.1	−16.4	−23.9	−19.7
CASTILLA – LA MANCHA	−4.1	−21.6	−28.7	−25.9
CASTILLA AND LEON	−4.6	−24.1	−30.9	−28.0
CATALUÑA	−4.1	−10.5	−18.6	−15.8
COMUNITAT VALENCIANA	−4.1	−0.2	−9.2	−16.1
EXTREMADURA	−4.1	−20.3	−27.5	−24.9
GALICIA	−4.1	−14.6	−22.3	−19.0
BALEARS, ILLES	−4.1	0.6	−8.5	−15.4
CANARY ISLANDS	−4.1	24.9	13.7	6.4
RIOJA, LA	−4.1	−13.5	−21.3	−18.5
MADRID	−4.1	0	−9.0	−4.7
MURCIA	−4.1	−3.1	−11.8	−12.1
NAVARRA,	−4.1	−10.8	−18.9	−14.5
BASQUE COUNTRY	−4.1	−7.5	−15.8	−10.7
CEUTA	−4	−9.5	−17.8	−8.7
MELILLA	−4	−9.8	−17.8	−7.1

Source: Compiled from data from IMSERSO (http://www.imserso.es)

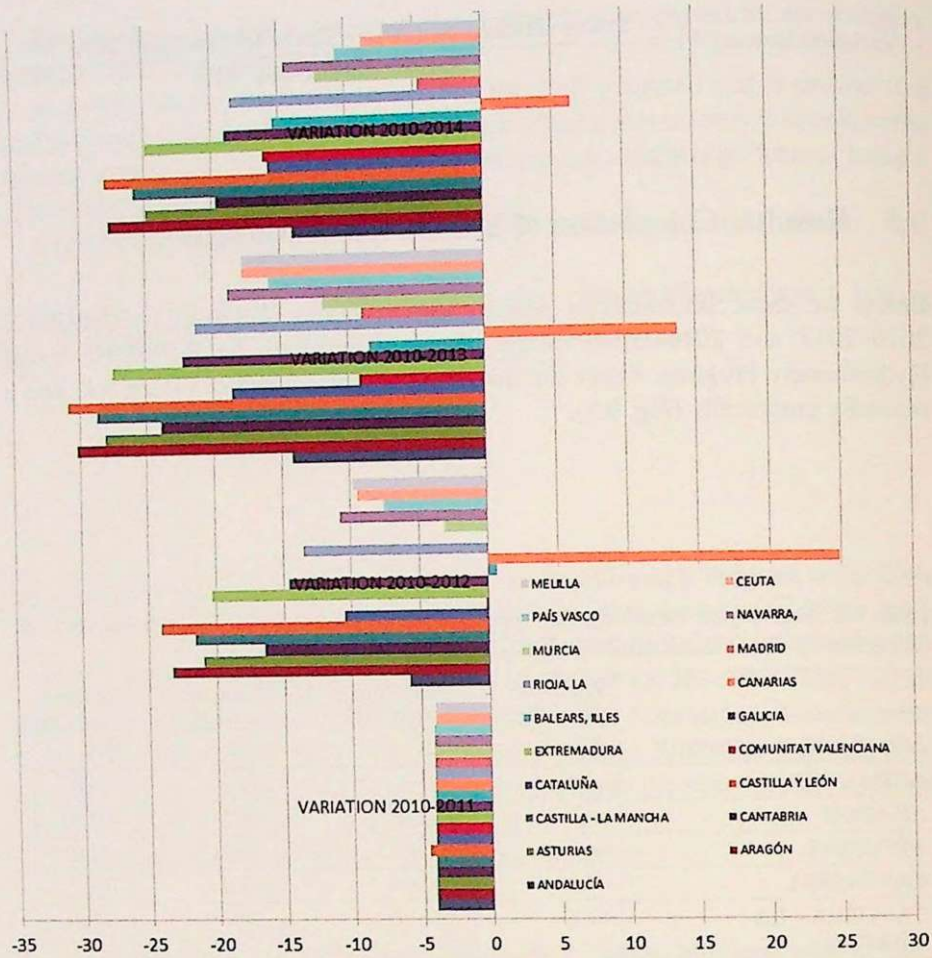

Fig. 9.1 Year to year variation of the spaces of the IMSERSO Social Hydrotherapy Program (2010–2011, 2010–2012, 2010–2013 and 2010–2014) (Source: Compiled from data from IMSERSO (http://www.imserso.es))

9.6 Discussion

9.6.1 Evolution of the Spaces of the IMSERSO Social Hydrotherapy Program (2010–2014) and Analysis of the Year to Year Variation. Analysis by Autonomous Communities

In all of the Autonomous Communities there has been a continued decline of spaces. An example can be seen in Cataluña, which in 2010 had a total of 39,800 spaces, 38,161 in 2011, 35,604 in 2012, 32,403 in 2013 and today (year 2014) it has 33,517. We also see the sharp decline, year on year, in Andalucia which has had a loss of more than 5,000 spaces in just 4 years.

Table 9.2 Evolution the spaces of the IMSERSO Social Hydrotherapy Program (2010, 2011, 2012 and 2014

	2010	2011	2012	2013	2014
Canary Islands	6,725	6,448	8,401	7,645	7,155

Source: Compiled from data from IMSERSO (http://www.imserso.es)

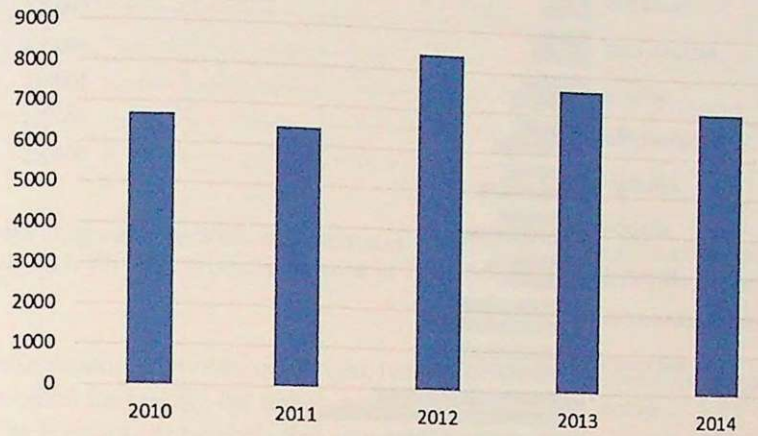

Fig. 9.2 Evolution of the number of spaces in the IMSERSO Social Hydrotherapy Program (Source: Compiled from data from IMSERSO (http://www.imserso.es))

The only community that goes against this general trend in Spain is the Canary Islands, which has been increasing the number of spaces over the years (Table 9.2 and Fig. 9.2).

To summarise, the past 2 years under consideration (2013 and 2014) are characterized by a decrease in the number of spaces allocated to this important program. The chart set forth below (Fig. 9.3) represents the evolution of the spaces of the IMSERSO Social Hydrotherapy Program by Autonomous Communities for the time period 2010, 2011, 2013 and 2014.

If we analyze the percentage change, we see that this decline has been increasing since 2010-first year taken into consideration, since in 2011, there was a decrease of 4 % in almost all the Autonomous Communities (except Castilla and Leon which came to 4.6 %).

By 2013, the decline is much more intense when compared with the values of 2010, reaching more than 30 % (cases of the Autonomous Communities of Aragon and Castilla and Leon). Even in the Canary Islands, which by 2012 had increased by 25 % – has now just a growth of 13.7 % (which would be a decrease in the number of spaces if we analyze this with the previous year).

This trend is perpetuated this year, 2014, in many communities the decrease exceeding 24 % compared to 2010 (Castilla and León, Castilla La Mancha, Aragon, Asturias and Extremadura) and the rest has an average 10 % decrease, except the Canary Islands which increased with respect to 2010 by 6.4 % (but again, decreases in percentage compared to previous years).

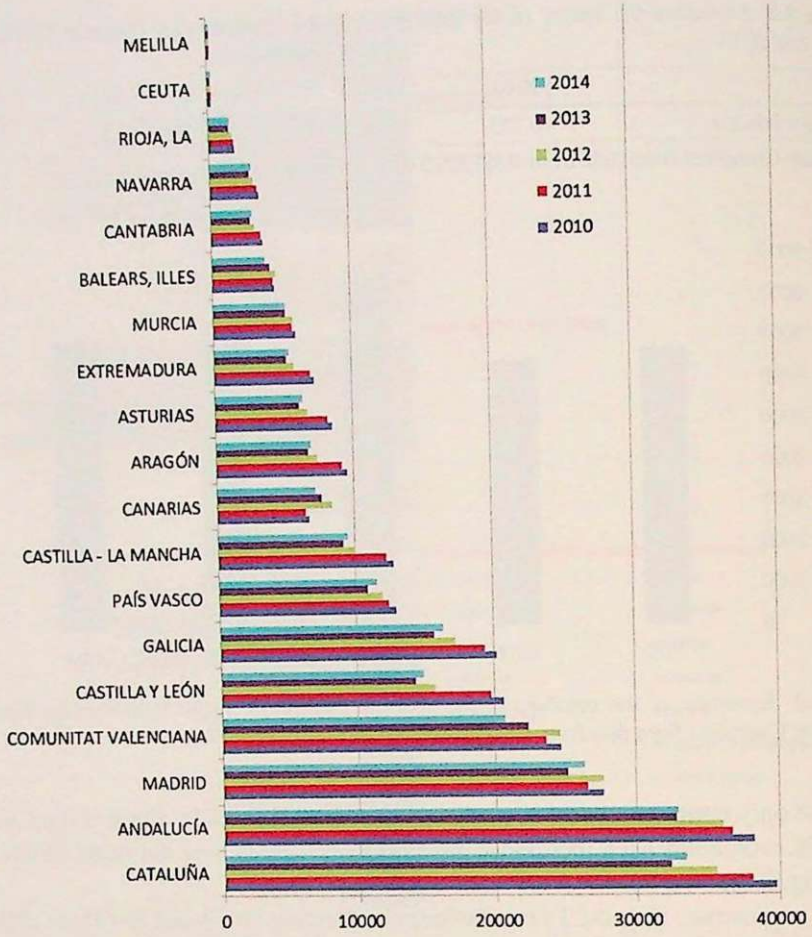

Fig. 9.3 Evolution of the spaces of the IMSERSO Social Hydrotherapy Program (2010, 2011, 2012, 2013 and 2014 analysis by Autonomous Communities (Source: Compiled from data from IMSERSO (http://www.imserso.es))

9.6.2 Forecast for the Spaces of the IMSERSO Social Hydrotherapy Program, for 2015–2020

After analyzing the hydrotherapy spaces in the period 2010–2014, we have seen a clear downward trend in the total number, which is why we are going to carry out an analysis of the expected forecast for the coming years.

The study of the future number of spaces will be done using regression (a method used to predict the value of a variable based on values given for the other variable). We will use the knowledge of the behaviour of the number of spaces in the years 2010–2014 for information about spaces in the years 2015 and 2020 (Fig. 9.4).

Noting the trend in the total spaces for Spain, we decided to make the adjustment using a least square parabola for all the Autonomous Communities, in some cases

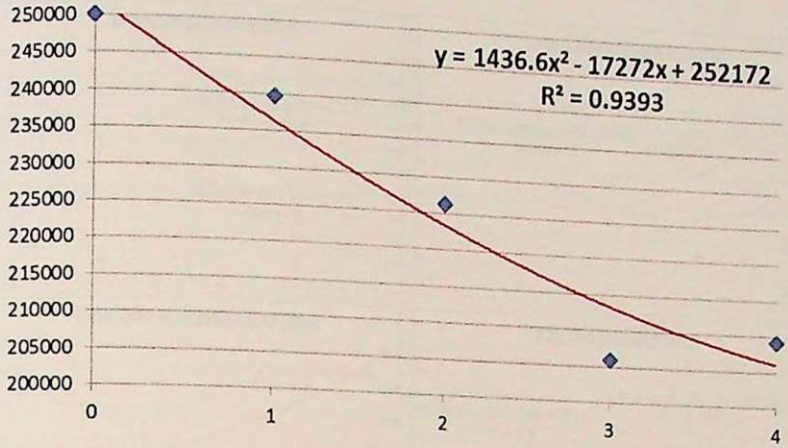

Fig. 9.4 Regression parabola with the spaces of the IMSERSO Social Hydrotherapy Program (2010, 2011, 2012 and 2014), for the whole of Spain (Source: Compiled by the author)

the adjustment will not be quite right, but so that the calculations are consistent, we have opted for making the same type of adjustment.

The least square parabola that approximates the set of points (X 1, Y 1), (X 2, Y 2), ...,(X n, Y n) is given by equation, where the constants a 0, a 1 and a 2 are determined by simultaneously solving the system of equations formed by multiplying the equation by 1, X, Y, successively, and then adding it up.

$$\begin{cases} \Sigma Y = a_0 N + a_1 \Sigma X + a_2 \Sigma X^2 \\ \Sigma XY = a_0 \Sigma X + a_1 \Sigma X^2 + a_2 \Sigma X^3 \\ \Sigma X^2 Y = a_0 \Sigma X^2 + a_1 \Sigma X^3 + a_2 \Sigma X^4 \end{cases}$$

In our case, the regression is calculated directly in Excel, which also gives us the R 2 parameter, a number from 0 to 1 that reveals how closely the calculated values correspond to its actual data (the closer to 1 the better the approximation) (Fig. 9.5).

After calculating all the regression parabolas, we can obtain the values for the years forecast, simply by calculating the values for those years, with the formulas outlined in the table set forth below:

These forecasts are to be treated with care, since the further away the values are, the adjustment will be less rigorous, moreover, the normal is to have a much higher number of years for the fit to be more reliable. The graphical representation of the data provided in Table 9.3 can be seen in Figs. 9.6, 9.7 and 9.8.

But as we see, in general, it seems there will be a gradual recovery in the supply of hydrotherapy spaces, which also seems logical, since the active population is increasingly ageing and therefore will demand more spaces in hydrotherapy programs. Therefore, it seemed important to also analyze what happens to the elderly population. The entry set out below show the ratio of spaces per person of 64 years old or more, to see if some kind of social demand is not covered.

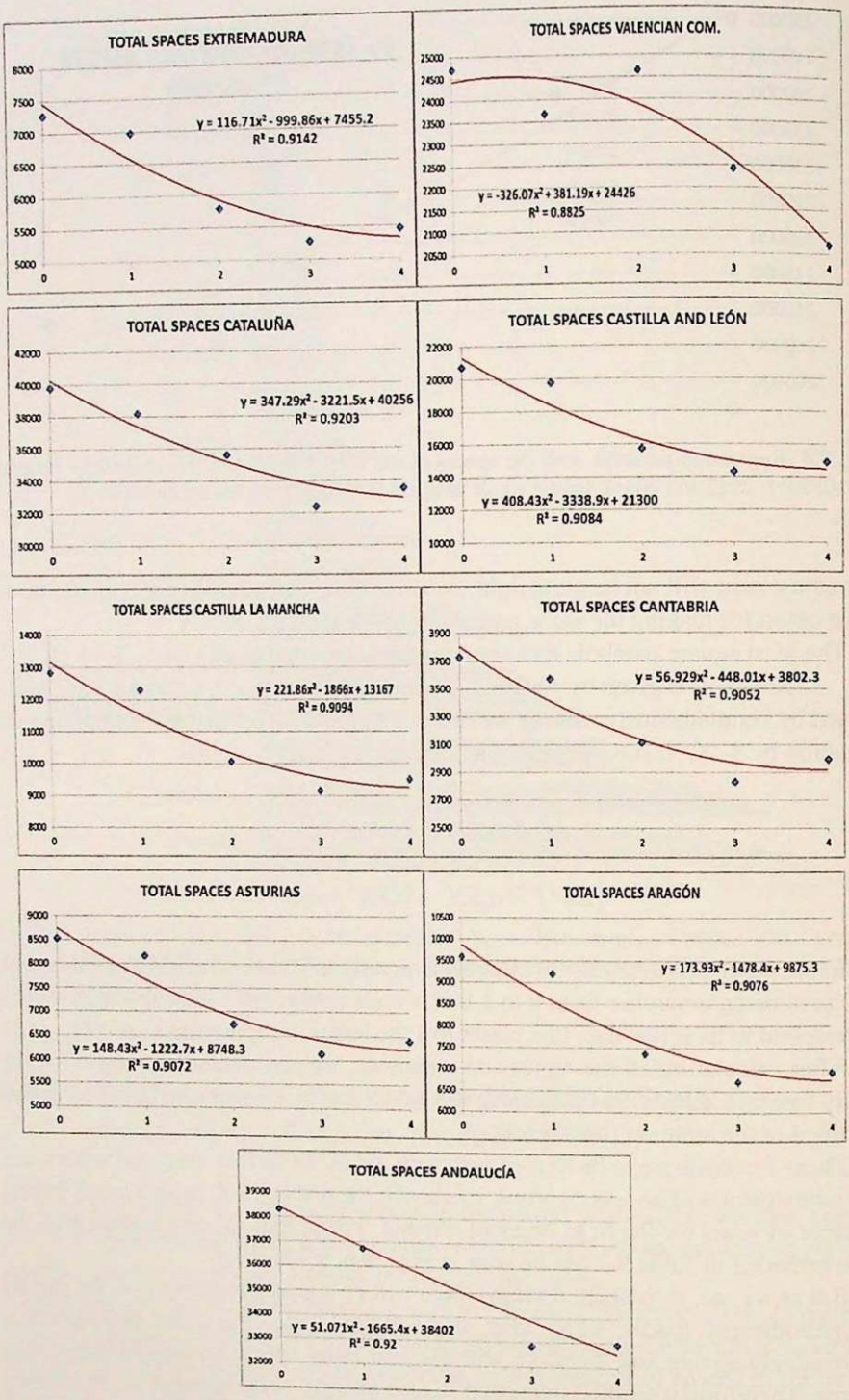

Fig. 9.5 Regression parabola with the spaces of the IMSERSO Social Hydrotherapy Program (2010, 2011, 2012, 2013 and 2014 analysis by Communities (Source: Compiled by the author)

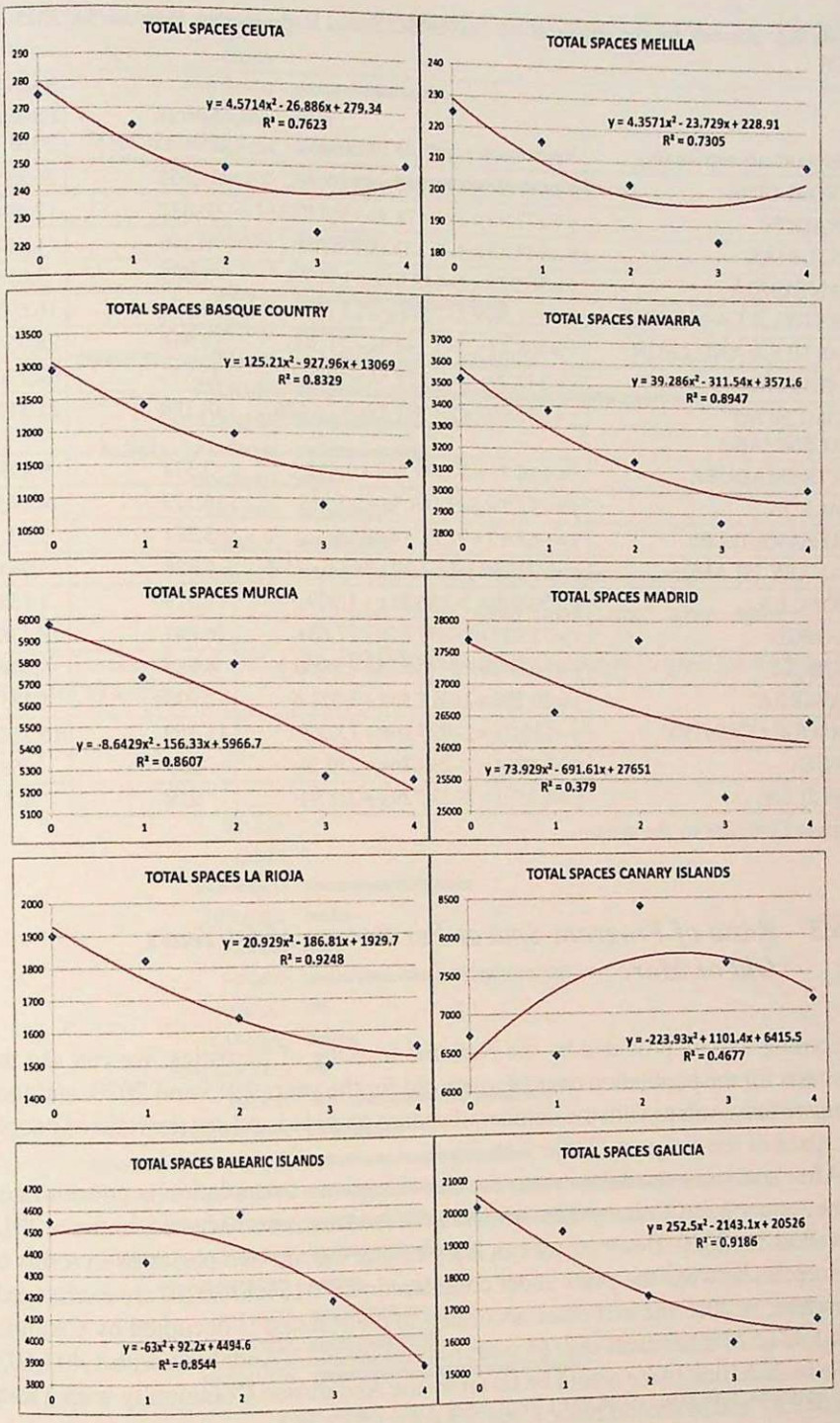

Fig. 9.5 (continued)

Table 9.3 Forecast for the spaces of the IMSERSO Social Hydrotherapy Program for 2015 and 2020

Autonomous community	Regression parabola formula	Spaces forecast 2015	Spaces forecast 2020
ANDALUCIA	$y=51.071\times2-1{,}665.4x+38{,}402$	31,352	26,855
ARAGON	$y=173.93\times2-1{,}478.4x+9{,}875.3$	6,832	12,484
ASTURIAS	$y=148.43\times2-1{,}222.7x+8{,}748.3$	6,346	11,364
CANTABRIA	$y=56.929\times2-448.01x+3{,}802.3$	2,985	5,015
CASTILLA LA MANCHA	$y=221.86\times2-1{,}866x+13{,}167$	9,384	16,693
CASTILLA AND LEON	$y=408.43\times2-3{,}338.9x+21{,}300$	14,816	28,754
CATALUÑA	$y=347.29\times2-3{,}221.5x+40{,}256$	32,831	42,770
COMUNITAT VALENCIANA	$y=-326.07\times2+381.19x+24{,}426$	18,180	21,318
EXTREMADURA	$y=116.71\times2-999.86x+7{,}455.2$	5,374	9,128
GALICIA	$y=252.5\times2-2{,}143.1x+20{,}526$	16,123	24,345
BALEARS, ILLES	$y=-63\times2+92.2x+4{,}494.6$	3,381	2,091
CANARY ISLANDS	$y=-223.93\times2+1{,}101.4x+6{,}415.5$	6,324	4,964
RIOJA, LA	$y=20.929\times2-186.81x+1{,}929.7$	1,519	2,155
MADRID	$y=73.929\times2-691.61x+27{,}651$	26,041	28,128
MURCIA	$y=-8.6429\times2-156.33x+5{,}966.7$	4,969	3,539
NAVARRA	$y=39.286\times2-311.54x+3{,}571.6$	2,996	4,385
BASQUE COUNTRY	$y=125.21\times2-927.96x+13{,}069$	11,559	16,310
CEUTA	$y=4.5714\times2-26.886x+279.34$	259	468
MELILLA	$y=4.3571\times2-23.729x+228.91$	219	427

Source: Compiled by the author

9.6.3 Ratio of Program Spaces Per Person of 64 Years Old or More

According to data provided by the National Institute of Statistics, we can see the forecasts for the population over 64 years old for the years 2015 and 2020, and thus compare these values with the number of spaces provided and see the ratio of people per space of the program (Table 9.4).

After analyzing the data we can say that the greatest population is concentrated in the Autonomous Communities of Cataluña, Andalucia and Madrid, both for 2015 as well as for 2020. However we can also see that the top two positions in terms of the forecast between the years under consideration (2015 and 2020) are exchanged. Therefore, in 2015 the first place according to the forecast is occupied by Cataluña with 1,421,529 inhabitants over 64 years old and second is Andalucia with 1,403,603, while in 2020 first place would be taken by the Andalusian Community with a total of 1,539,67 and in second place Cataluña with 1,522,152.

As for the places with smaller populations they remain unchanged for the two horizons raised. So, with the fewest is Melilla with 9,322 inhabitants over 64 years

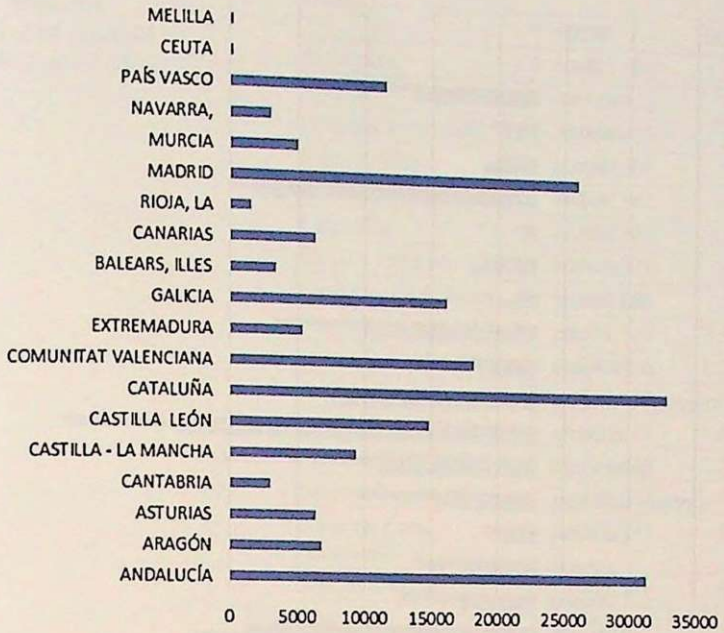

Fig. 9.6 Forecast for the spaces of the IMSERSO Social Hydrotherapy Program for 2015 (Source: Compiled by author)

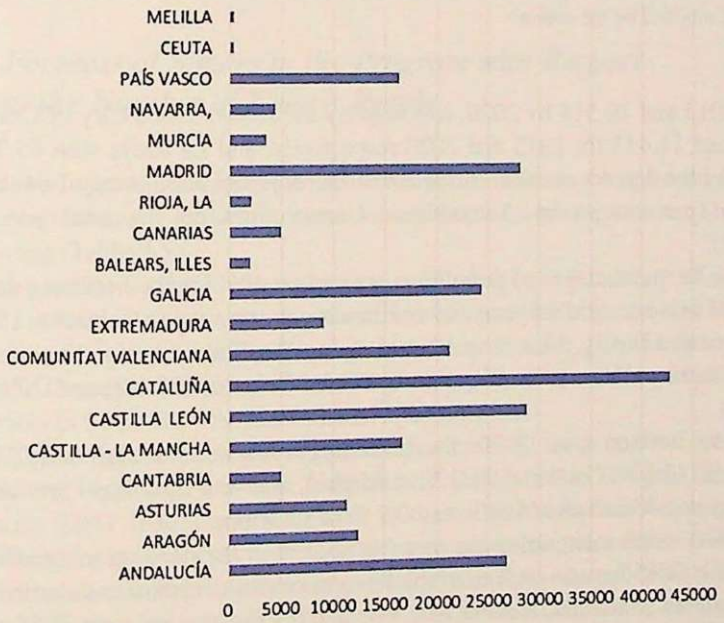

Fig. 9.7 Forecast for the spaces of the IMSERSO Social Hydrotherapy Program for 2020 (Source: Compiled by the author)

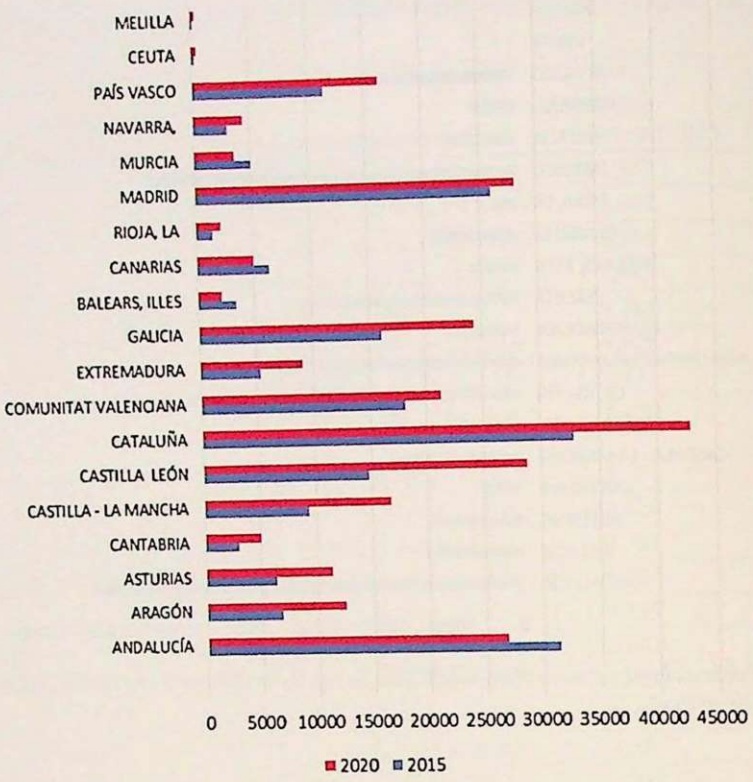

Fig. 9.8 Forecast for the spaces of the IMSERSO Social Hydrotherapy Program for 2015–2020 (Source: Compiled by the author)

old by 2015 and 10,514 by 2020, followed by the Autonomous City of Ceuta with 10,363 and 11,433 for 2015 and 2020 respectively, and La Rioja with 65,753 and 70,363 for the 2 years considered. Below is the projected population of 64 years old or more (percentages by Autonomous Communities on the total population) (Fig. 9.9).

As for the percentages of population we can see that for the horizon year 2015, 15.9 % of persons aged 64 years old or more is concentrated in Cataluña, 15.7 % in Andalucia and finally, 12.9 % in Madrid, being therefore very aged communities. The less representative percentages are 0.1 % for Ceuta and Melilla and 0.7 % of the La Rioja.

For the horizon year 2020, the percentages show a similar trend, 16.0 % Andalucía, 15.8 % Cataluña, 13.2 % in Madrid, and less significant are the 0.1 % shown by both Ceuta and Melilla and 0.7 % of La Rioja.

It is also worth mentioning the fact that 55.2 % of the population aged up to 64 years old in 2015 focuses on four of the 19 autonomous communities studied, which are Andalucia, Cataluña, Madrid and Valencia. In the horizon year 2020 the percentage of these four communities goes up to a percentage load of 55.7 % over the total population of Spain.

Table 9.4 Projected population of 64 years old or more for 2015 and 2020

	2015	2020
Andalucia	1,403,603	1,539,673
Aragon	289,128	302,606
Asturias, Principality of	257,437	272,778
Balears, Illes	180,207	202,608
Canary Islands	337,142	390,548
Cantabria	123,174	135,122
Castilla and León	604,978	628,121
Castilla – La Mancha	393,081	415,379
Cataluña	1,421,529	1,522,152
Comunitat Valenciana	942,915	1,030,869
Extremadura	218,653	228,352
Galicia	662,718	694,670
Madrid, Community of	1,154,189	1,277,450
Murcia, Region of	230,117	254,442
Navarra, Foral community of	127,091	138,026
Basque country	482,381	517,917
Rioja, La	65,753	70,363
Ceuta	10,363	11,433
Melilla	9,322	10,514
Total Spain	8,913,776	9,643,031

Source: INE (www.ine.es)

9.6.4 *Forecast of Spaces in the Program with Respect to the Number of Elderly People*

The number of spaces relating to the number of people that are 64 years old or more for each Autonomous Community are examined below, whose values are shown in the following (Table 9.5).

We can see that for 2015, the highest ratios of places per inhabitant of more 64 years old are concentrated in the communities of Ceuta, Asturias and Extremadura with a value of 0.025 (Fig. 9.10). By contrast, lower ratios are given in the communities of the Canary and Balearic Islands and Valencia, with a value of 0.019. The average ratio in Spain for this year is 0.023 spaces/person.

By 2020, the highest ratios according to the forecast will focus on the Community of Castilla and León with 0.046, in Asturias with 0.042, and in Aragon, Ceuta and Melilla with 0.041 spaces/person in each of them. As for the smaller number of spaces offered for hydrotherapy in this horizon year, we can place them in Balearic Islands with a value of 0.010 spaces per person greater than or equal to 64 years old, the Canary Islands with a value of 0.013 and Murcia with 0.014. The average ratio in Spain with this estimate for 2020 would be set at 0.031 a significantly higher value than the average expected for 2015, which stood at 0.023.

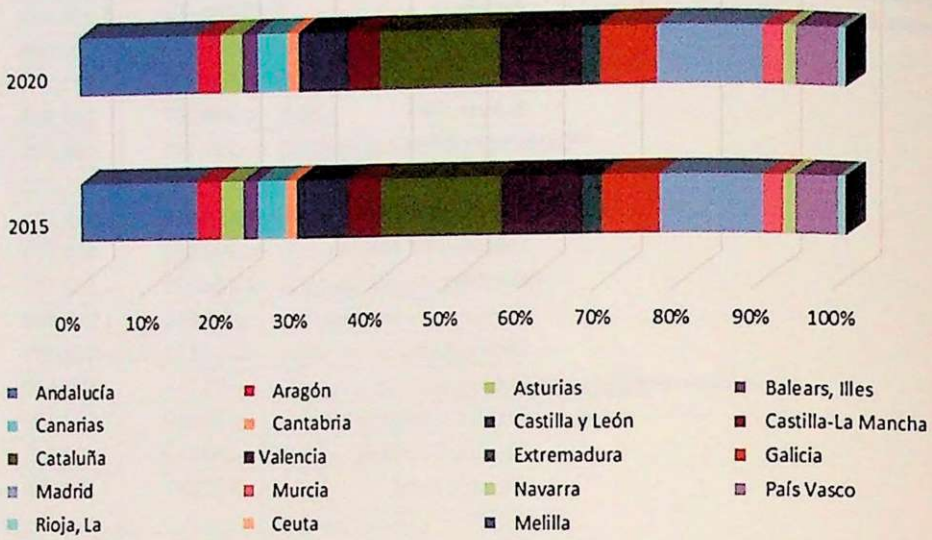

Fig. 9.9 Projected population of 64 years old or more percentages by communities over the total population (Source: Prepared by the INE)

Table 9.5 Forecast of spaces offered in the IMSERSO Social Hydrotherapy program with respect to the number of elderly people

Tabla 7. Ratio of sp	2015	2020
Andalucía	0.022	0.017
Aragon	0.024	0.041
Asturias	0.025	0.042
Balears, Illes	0.019	0.010
Canary Islands	0.019	0.013
Cantabria	0.024	0.037
Castilla and León	0.024	0.046
Castilla-La Mancha	0.024	0.040
Cataluña	0.023	0.028
Valencia	0.019	0.021
Extremadura	0.025	0.040
Galicia	0.024	0.035
Madrid	0.023	0.022
Murcia	0.022	0.014
Navarra	0.024	0.032
Basque country	0.024	0.031
Rioja, La	0.023	0.031
Ceuta	0.025	0.041
Melilla	0.024	0.041

Source: Prepared by the INE

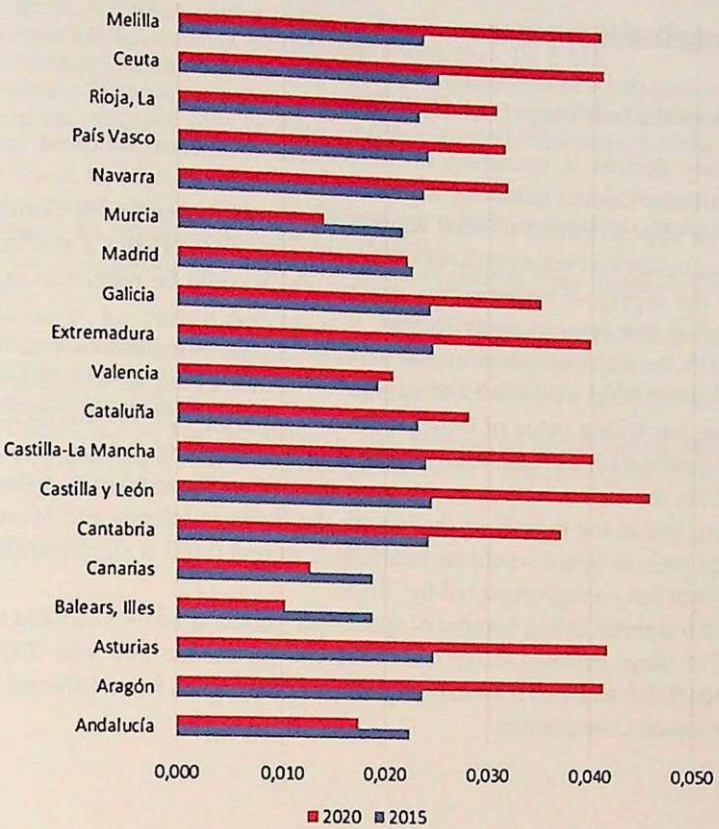

Fig. 9.10 Ratio of spaces per person of 64 years old or more (Source: Prepared by the INE)

It is also worth noting that the 2015 ratios range between 0.019 and 0.025 and for the horizon year 2020 they range between 0.010 and 0.041, so we can say that the difference in expected spaces available per person over 64 years old is much greater in some communities than in others, promoting differences between communities that are greater than those there are now.

It should also be noted that the Community of Asturias is always in the leading positions in the number of spaces available, and by 2020 a large slowdown is expected in terms of the ratio studied by the Communities of Castilla and León and Aragon, which in 2015 are expected to have values slightly higher than the Spanish average ratio.

9.7 Conclusions

We can draw the following conclusions from the analysis:

- A steady decline is occurring in the number of spaces allocated in all the Autonomous Communities.
- From an approximation of least squares for all the Autonomous Communities the conclusion that seems will occur for the years 2015–2020 is a gradual recovery in the supply of hydrotherapy spaces, which could be related to an ageing population that Spain is experiencing.
- For 2015, the ratios of spaces available per inhabitant older than 64 years old will be around 0.023, with the Communities of Ceuta, Asturias and Extremadura ranking top with a value of 0.025 and the Canary Islands, the Balearic Islands and Valencia with a value of 0.019 will be at the bottom of the list.
- For 2020, the highest ratios are concentrated in Castilla and León, Asturias and Aragon, and at the bottom of the list are the Balearic Islands and Murcia. The average ratio in Spain would be established around 0.031 a significantly higher value than the average expected for 2015.
- The ratio corresponding number of spaces per person aged 64 years old or more, for 2015 range between 0.019 and 0.025 and for the horizon year 2020 range between 0.010 and 0.041, so the inequality of offers soars from different Spanish Autonomous Communities.

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Chapter 10
Diversity and Interconnection: Spas, Health and Wellness Tourism

Maria Engrácia Leandro, Fernanda Nogueira, and Ana Branca Soeiro de Carvalho

Abstract Health, spa's, hydrotherapy, tourism, welfare and economic interests become deeply intertwined components. This interconnection is looking for an intense answer to the ills of concern to today's humans. We emphasize that, in a context where we extremely value health, beyond traditional diseases, we found that have been emerging new diseases and perceptions about them, especially those who are designated as civilization diseases. One of the most notorious problems was depression. This type associated with new dilemmas, which affect individuals in nowadays societies, always in search of more welfare, when human aspirations have no boundaries, diseases assume facets that are not always easy to identify. The person who as depression is, in a way, strongly subject to medication when is bad feeling. But have been many other alternatives arise. Several situations call for new social restructuring forms and styles of life, but also cover other environments and cultures capable to provide access to more time and leisure, which is reflected by behavioral changes and appellative alternative medicines. It is in these situations that the phenomena of Hydrotherapy/SPA's and tourism, coming from times of yore, with its entire range of activities, have achieved great strength, also appearing as an answer to these well-being matters. These reflective perspectives are issues that we propose to study in this research, with an emphasis on their interconnections.

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10.1 Introduction

The relationship between hydrotherapy, health and tourism is a reality that comes from times of yore, with particular reference to the Indian, Greek, Roman and Jewish, concerned with activities of this nature cultures. Primarily involved medical treatments related to water, spas and spiritualities, causing very often people had to move from one place to another in search of these goods and services. Still famous Roman and Turkish baths and spiritualities that granting healings, attract visitors from different parts. At present, although these strands assume new meanings and have been making in social, economic and cultural major projects, many of these elements back to reemerge and resume new breath.

In pursuit of health, as synonymous with well-being, happiness and long life without ailments or similar problems, individuals and their families are increasingly available to travel from one side to the other side of the world, where it is likely augur retrieve it or improve it. Feel bodily well and preserve life in the best possible conditions, is a key policy requirement, precisely because of its primary human and social importance. And for both, it may not be necessary to use only the most conventional medical treatments but also to rely on other forms of medicine where to enroll also various types of thermal treatment.

It is in this context that inflation has also been taking new impact the "health tourism" that includes not only medical tourism, medical tourism but still assumes special significance where the welfare and happiness of tourists. In a context where there is a growing awareness about the body and mind and abound-called "diseases of civilization", many people leave in search of evidence capable of (re) enchant, forget the hardships of day-to-day, make new discoveries, dreaming, living new emotions and rebuild its interior and psychological space. Globally, tourism health and holistic well-being, composite and complex, because of its scope and by-products, while privileging the paradigm of health and well-being recommended by the WHO (World Health Organization), invests in tourism and increasingly sought happiness business.

It is in this context that there has been a growing interest in the Hydrotherapy in their medical, cultural, recreational, social and economic aspects. For the multitude of their potential and characteristics, the water source of life, very early works as a regenerator and filter purifier whole, where it passes out and cleaned of all impurities, including moral and spiritual nature. The thermal and medicinal mineral waters used for bathing and health care were still associated cures for many diseases. Currently, many of them are uses related to health, beauty, aesthetics, pharmacology, tourism and leisure. The water, either salt or spa has a huge weight in modern homes as an ingredient of fun, relaxation and health promotion or disease prevention. Around him have been developing important tourist centers where social Hydrotherapy also occupies a prominent place within an industry "clusters".

In this work, because it comes with a very large problem, especially in the perspective of reflective nature, we will consider three key aspects of this interconnection integrating health, Hydrotherapy and tourism. The first attempts to analyze the importance

accorded to health in terms of body, experiential and social harmony and the plurality of resources for this purpose. The second aims to grasp the revaluation of Hydrotherapy in a diverse context of medicines and health care and extending supply and tourist diversity. Finally, the third is to study the interconnections of these key dimensions of modern life as are health, hydrotherapy and tourism, while factors of well-being.

10.2 Looking for Health, Wellness Searches

Nowadays the concept of health goes far beyond the simple design of "good health" as we wanted for ourselves and our neighbors. Far from enroll in the health-disease binomial as antagonistic situations, or is strictly limited to the field of medicine, health-transforming it comes at a crucial value for individuals and a social paradigm, i.e., a key to the reading of social reality and a principle of action in his favor, even as synonymous with happiness so lauded in today's societies. If in the past this could still be transferred to the life beyond, today wants is earthly and material, "hic et nunc". Now health, even as a prospective factor long and healthy life, ideally unending, participates in this dimension (Illich 1975).

In this sense, with the worsening economic and social crisis in which we live immersed, major societal issues persist in rising unemployment and poverty, alongside highlights the health paradigm. Investment in screening for behavioral problems at all ages of life, in short on prevention and health promotion, even to decrease their costs, is significant in this regard. There has been a prevalence of health in social discourses of today (Nogueira 2014).

Also here the issue is not entirely new. The political thought of Plato in his "Republic", indiscipline and addiction in general are associated with a disease, so the "real city" appears as pathological. This is how the contents of the "Republic" is given a broad reading health plan oriented to the common good, translating your plan "perfectionist" policy. Then if preserving health of society as a whole, establishing a complete parallel between the health and justice, the latter being conceived as the health of society.[1]

The irony is that under this perspective to today's looks have been the proclaimed liberal societies that have adopted a health plan similar kind of totalitarian thinking. This assertion is quite explicit in the famous WHO definition of health, 1946, and that has not been modified: "Health is the most complete physical, mental and social wellbeing and not merely the absence of disease." This definition, in addition to their generosity, contains a huge dose of bio-power conceptualized by Michel Foucault (1975), the medically want to take care of all aspects of human and social life. Contains in germ a possible extension of the complete medicalization of life

[1] Note that the medicalization of society with clear rules about what is a healthy but not about what is fair, behavior were erected. Very concretely, the "diagnosis" of social pathologies has supplanted social injustices.

and their human and social behavior, as has been observed since the second half of the twentieth century, much like the ideal of Plato.

The health has thus to be conceived as something positive, something good or bad associated with optimal welfare (Leandro 2014). But when this ideal becomes a health program of governments in favor of the people, health is viewed as something requiring objective, first, conditions of well-being[2] in all possible dimensions and, secondly, to build this welfare as Bentham says this build is "building happiness", widely sought in today's societies. In all dimensions, under the aegis of health, looking full of body, emotional and social well-being.

On the other hand, have also been increasing diseases of the inner malaise, under the designation of stress, anxiety, depression or mental illness that some authors attribute to changes in the contemporary individuality, ie, new dilemmas that are many and new lifestyles (Ehrenberg 1998). In this respect, Marcel Drulhe (1996) advances the notion of "sociopathologies" to designate the diseases that have appeared because of the profound epidemiological, medical and societal transformations, making the intervention of medicines to widen the social somatic.

In large part, many of these diseases are on the competence of psychiatrists and experts alike of their prescriptions, have also gained great impact the use of medicines and other less conventional forms of treatment. This case are acupuncture, homeopathy, osteopathy, psychotherapy, diet, exercise, spiritual practices, hydrotherapy and tours where you expect to enjoy pleasant and relaxing conditions able to bring back the health and welfare being sought.

Thus, individuals increasingly have access to a therapeutic pluralism which also abound medicines (un) hope. Indeed, by increasing the evils of depressive intimate way to happiness by revenue responds alchemy of despair; the medicalization of malaise opposes depression as authentic disease of the century as already defined the WHO. For advertising making the apology of a wonder drug as was for instance the case of Prozac, opposes counter-advertising a drug without toxicity or addictiveness what has been revealing fallacious. If medicalization has become a social phenomenon, it is nonetheless raise questions of various kinds mainly due to its side effects.

Roughly speaking, within the field[3] of health care, the use of new therapies tends to show a demand which falls both in search of a cure, perhaps of desperation, as a new philosophy of health resources outside of conventional medicine, also here seeking a new universe of meaning (Nogueira 2014). In the 1970s, emerges a review of the medical establishment that the book of Ivan Illich "Nemesis médicale" crystallizes the salient features. The expansion of the health sector leads to a

[2] The notion of welfare has been used as an interpersonal measure of moral judgment, the level of which the basic needs, ie, human needs whose spectrum has been expanding, are satisfied (J. Griffin 1986).

[3] The notion of field is essential in the work of Pierre Bourdieu (1980, p. 113). Considers that the various fields of social reality lend themselves to synchronous arrest as structured spaces of positions, whose properties depend on their position in space and can be analyzed independently of its features and its occupants. Each of these fields has its own "general laws" as with the field of politics, religion, science, economics have laws invariant operation, which makes its own projects are not fools.

medicalization of existence from birth to death and more recently the emergence of a policy to reduce the risks. But these excesses have high prices for health as indicated by the author. Hence the increasing use of unconventional treatments also has to do with the desire to avoid, reduce or remedy side effects arising here. In this sense, the unconventional care also allow expressing what the medical profession tends to silence or at least have less into consideration: the transformations wrought in the body and the effects caused by certain treatments and medications, perhaps saturating the body itself to this purpose.

It is in this context that, in addition to conventional medicine, have been (re) gaining great interest designated "candy medicines", ie, a wide range of practices and more or less heterodox medicines because considered less aggressive, among which stand out hydrotherapy and medical tourism on which we pause following this work. It, however, reveal an essential aspect that relates to the fact that these medicines also enroll in a way of life. It is not only the practices stemming from a complement to conventional medicine, but a relationship with the world that all too often involves dietary changes, made of ecological consciousness, a belief in the existence of a supra-empirical world.

Hence these new universes own sense of each, in his biographical background and therapeutic itinerary enroll in very particular social contexts. The relationship with the life, body, health, illness and care fall at the same time the individual and the social. In other words, this new interest in these medicines interpellate individuals at some time in its history and meaning which give it.

10.3 Hydrotherapy as a Resource for Health and Wellness

The hydrotherapy, in the form of treatment and leisure through the waters, is a medicine which is in memory of the times. In antiquity, have been the Greeks and Romans but also the Turks who began by paying more attention to the hot springs and its prerogatives. We were at a time when prevailing interpretation of a supernatural disease, which form of punishment of the gods who came down on humans. Hence the abundance of cults and myths, one of them associated to the miraculous powers of the thermal waters. If water symbolizes life, that they are meteoric and sprout hot and sulphurous earth, also contributes to these interpretations. We emphasize that the whole place of pilgrimage from different religions suffered from its aquifers centers and their sources and not by accident that many pilgrims resort to these waters to purify and heal.

These were people who brought us to these discoveries and cultural practices. Around the springs of thermal water were being built buildings safeguarding the designated spa or tails, which were making in development focuses hydrotherapy, towns and cities and other social infrastructure. The water, and more specifically natural mineral water, appears therefore, an integrator and structuring element of people and spaces due to have entered the life of the people, for centuries, as a component thereof.

The symbolic significance of water fall into three dominant themes: the source of life, a means of purification, center regency. Undifferentiated mass and free water is a plethora of potential. As a primary condition of life, contains all virtues and promises of development alongside threats of resorption. It is presented as a symbol of cosmogony. Having the ability to cleanse, heal and rejuvenate introduces in eternity, even an earthly eternity with both you dream these days (Leandro 2014).

Emerge in the waters to leave them without fully dissolve except for a symbolic death, is returning to the sources; remake itself into an immense reservoir of great potential and then go look for new forces is inherent to the thermal baths. The waters bring life, give strength and purity, whether spiritual or corporal, give encouragement, joy, vision, fullness and life. In the Bible the desert wells are sources that offer nomadic joy and wonder, fertilization and nutrition. In Palestine, the hospitality gate has water always available to offer visitors to wash their hands and feet, to ensure peace and rest. The entire Old Testament celebrates the magnificence of the water. If the water flow from creation are present in creation itself.

Instead, the horrific dirty water becomes disgusting sight and smell, sick or dead: pollution is cancer of the water. A technological and industrial civilization that has lead to multiple pollutants, can enliven the need to change strategies, new anxieties before what seems threatening to the health and quality of life of populations. Hence, the water also presents itself as signified and signifier, which seems to mirror humans in their physical, moral and social whole and can be used to reflect the element as dressing and revitalization of life in its in its entirety.

No wonder that since ancient times the water, and even more the waters that are associated with purification and healing as with thermal waters, is raised to the sacralization. The city of Caldas da Rainha, having developed since the fifteenth century in the shadow of the hot springs, behaves near their springs which is called the "holy water" zone. Sustained the idea that the diseases themselves from across the waters in conjunction with prayer, thereby allowing the body and get rid of bad health. It is not by chance that the first church of this city called "NossaSenhora do Pópulo", is precisely recessed into the building of their spa.

The millennial use of thermal and medicinal mineral waters used for bathing and health care is closely linked to curing diseases, because of their medicinal properties. Worth mentioning particular diseases related to the digestive and respiratory system, liver, hypertension, rheumatism, diabetes, obesity ... If it is true that the absolute cure of these diseases can hardly be achieved through these treatments intermittently, the that exists is that enrolling in a course or therapeutic itinerary, behave enrolled in regular annual or seasonal care routines, being typically associated with periods of individual or family vacation.

Following these pathways, patients seek the immediate improvement of their health and the reduction of suffering and the medium and long-term freedom from ingestion of pharmacological drugs or other forms of medical intervention. Gains come here for all: directly to patients, so they can live better and avoid a more thorough use of formal health care and medicines; for governments and health services, in this way, can make savings of various kinds. So because health and its components are part of an increasingly complex economic, political, social, technological, cultural and metaphysical imbroglio.

Currently, the different uses made of the thermal waters according to their chemical composition, falls to its importance in recovery and health promotion or the most varied uses made of them to another type of treatment. Many of them are extracted products or forge targeted therapies for beauty, aesthetics, pharmacology, health, tourism and leisure. In parallel, in connection with these spaces have been other offers health care more consistent with modern health concerns and their settings developed.

But there will still be place to say that very early the bathing spaces themselves were making in leisure, which abound Spa's spiritualities and various cultural activities, allowing bathers and perhaps to their relatives enjoying other activities, including tourist character outside the respective treatments. More recently, with the rapid increase in so-called "diseases of civilization", beyond the conventional pharmacology or in spite of them, it is also more amenable to the appeal to combat stress and anxiety that calm and pleasant, landscaped environments and climatic many individuals are immersed in the day-to-day.

After some time some slowdown, no wonder they return periodically to hasten thermal spaces multiple streams of holidaymakers, Travellers visitors or individuals looking for a space to take care of fruition, unwind, relax, grow, live, recover, shopping or enjoy other sociabilities forged over the periodicity of these times (re). In this perspective, these peculiar thermal spaces meet a set of conditions that can exert power and driving force of attraction to captivate tourists in search of better health and well-being around the consumption of a public good like water with natural elements. In doing so, also give rise to the development of a whole range of activities able to streamline various economic and social forces to promote population mobility between various local public natural but diversified.

The spa in people's lives, social and cultural needs of living there and coming aspects constitute a learning option of individual and collective experiences and submission to certain social practices and hot in that many other practices are stopped and sojourn times. "The disruption that relocation to the spa down (...) opens up space for the emergence of a mode of temporary life, prone to the construction of provisional and ephemeral sociability of statutory symbols of redefining lifestyles. In this sense, the hot season plays not only a function of revitalization and evasion, but also, and therefore, an identity function" (Ferreira 1994, p. 47).

In this context, spa goers acquire a particular identity tending to incorporate in the identity of those places of the buildings, the healing such singularities waters and hence of their diseases or other objects that lead to the here. These thermal identity symbols also tend to spread to other recreational and tourist elements that do not exist, or at least would not have the same peculiarities, without the presence of these actors. Hence we can talk about aspects of change under the influence of these social and cultural dynamics able to streamline the activities of a city or a spa area.

The identity of the thermal areas is very often supported by local political and economic powers to attract tourists, to (re) create new jobs in an attempt to make the city more attractive or other population aggregates. Tend to invest in strengthening their characteristics, symbols, statutes, prerogatives of a healthy lifestyle that, at present, also binds to the good quality of infrastructure, climate, the good air, landscapes, gastronomy, good people who is good live, and may confer, for example, the

distinctive "city health or welfare" (Baptista 2006). When we reveal these strands, bring to the foreground of this dynamic urban or rural areas with thermal water with characteristics different from others also for their agglutinating and attractive capabilities. These features reinforce its capacity to move people around a specific feature such as hydrological oriented recovery and health promotion and in doing so also give rise to the development of other identities, shopping and sightseeing activities.

10.4 Health Tourism, Spa Tourism

Conceptually, tourism is that traveling for pleasure from one place to another a different one where one lives in search of leisure, rest, during which people resting, make new discoveries and seek to remake wear a year or other periods of work. The tourist area is defined by a set of natural, cultural and social resources capable of exercising attraction and driving force to captivate people, knowing that very often the tourists do not see what you lack or would like to see, but what you say or schedule to see (Machado Pais 2007). Anyway, brings together planning, natural resources, cultural and technological equipment capable of creating economic gains, political and social changes that are also not oblivious to the potential of a given space inhabited and built to attract tourist flows.

But others occasioned by the simple tourist like to travel and discover new worlds. This may be the case, for example, freed from constraints or other professionals with economic, professional and cultural arrangements have retired people. Particularly since the second half of the twentieth century, due to the improvement of living conditions and schooling, tourism can be considered an industry, a "visible exports and imports (in) "the coming and going of great economic importance, political, social and cultural. In certain circumstances, and the case of thermal spaces is not less emblematic, tourism is a key factor for the development of the productive system of a region.

It is within this framework that jointly health tourism, coming from ancient times, has been (re) acquire great interest these days. Currently, health tourism is properly told more focused on medical and hospital activity in search of answers that normally are not in their places or in their countries. But other factors may intervene herein weight: price competition laws, waiting lists are ... particularly in this case with disease diagnoses reserved, perhaps incurable, orthopedic surgery, orthodontic, gastric, cardiac and plastic, causing individuals to move is in search of the answers you seek to know where they may be more likely or more secured. It should be noted, though, that contemporary biotechnological prowess, especially for regenerative medicine, allow individuals dream of the body to which they aspire, remove and reintroduce new bodies, putting aids, searching for an eternally renewed health, which form continued resurrection, although it has to move great distances and make great investments.

Importantly, we live in a context of structural rarity that contrasts with the fact of human aspirations have no boundaries, and the case of health as critical of today's societies and draft long life value, not the least emblematic. This dissatisfaction, which for humans tends to be confused with the pulse of life, invests in the demands

on the body and the health of our dreams and all that surrounds them. In this sense, the reflexes that seek not only concerns the fight against disease but against the finitude of life and in the name of a dilated health to human redefinition as such. To achieve this, it appears that there is growing interest games this matter, whether of individual and family-oriented, whether political, economic, medical and social, within which health tourism takes a prominent place as an activity tourism and promotion of health and happiness business.

In parallel, this type of medical tourism has been particularly great impact to achieve a form of medical tourism in search of better health and holistic wellness. Given the growing interest in the body and the mind, looking for strong emotions and rewarding (Leandro and Leandro 2014) the search of unique experiences in places with different architectures and landscapes, it is a form of tourism growth national and international, encompassing various forms of therapy are not always linked to the hospital and doctor.

Hence one can say that it is a composite and complex tourist product. The pleasant travel, domestic or international, capable of being opposed to the local stress, anxiety and routines of day-to-day are increasingly in vogue. Abound, even deals of this nature in the form of package. Also, here, the sweet oriented Hydrotherapy and Spa, S or salt water, covering the basic thalassotherapy treatments and enjoyment in their beaches, it has become a crucial factor in grooming for health.

It is understood, moreover, that, in a problematic picture like this, where denotes the water, either salt or spa has a huge weight in modern homes as an ingredient of fun, relaxation and health promotion or disease prevention, there is availability to cherish Hydrotherapy and a whole bunch of other related activities. The spa tourism, beach tourism is an integral part of, occurring where there is thermal water with high temperature exceeding 25°, is increasingly linked to the prevention, leisure and the pursuit of physical, emotional and social well-being. Until recently, for the populations of modest social status, in addition to treatment, these trips to the spa treatment centers would also be the only opportunity for holidays and rest in your life. Today, with the passage of the companies working for corporate employment, the situation is different.

Very concretely, in the hot springs looking alleviation of disease, cyclic replenishment of physical and mental well-being and consumption of tourist services and playful nature. In this sense we can say that tourism health and wellness emphasizes holistic health paradigm advocated by the WHO also enrolling in new searches for happiness and experience of strong emotions. No wonder, then, that the health, tourism and Hydrotherapy trilogy are deeply interconnected and simultaneously sought in today's world realities.

In Portugal, the existence of a wide range of thermal waters for therapeutic purposes all over the country's extensive coastline which to develop thalassotherapy centers, increasing quality hotel, the installation of SPA brands are factors that boost the development this product. Hence, the upgrading of thermal instances, it constitutes an agglutinating poles of persons and services. Due to the enlargement of a set of parallel activities in social and cultural character and a set of activities and services playful nature, either in their working spaces (gyms, libraries, living rooms and even retail shopping ...), either in its surrounding context, it quickly turned into tourist attraction centers.

Can thus be made different choices in diversified areas by thermal influence, especially in the aspect of social hydrotherapy. Grow alongside the medical, political and economic forces that implement, thinking and structuring this phenomenon in terms of domestic and foreign bearing in mind the cyclical movements of people audiences. The Hydrotherapy in people's lives, those who come and those who live there, provides the learning experiences of sociability and social practices that lead to new rhythms and temporary living options. Can thus speak of a "playfulation "the territory through thermal influence.

It should be noted that the practice of leisure confined to less than the area of SPA, he also increasingly integrated in the thermal spa and tourism space. Indeed, the modern notion of SPA, integrating massage and spa water or not part of a component of health through water. It differs, however, hydrotherapy in that this is limited to the field of medicine, as for constituting a supporting element of the medical treatment more preventive therapeutic character using only water for the medical effect. The thermal treatments take place in a given space, with a ritual itself, being the spa goers subject to medical prescription with surveillance and monitoring provided by specialized personnel. Have SPA operations involving the application and handling of a wide range of products aimed at providing wellness, beauty and health.

Anyway, this set of practices and initial and cyclical movements between locations seems to have structured a space-time, which would result in tourism, leisure, also integrating those supervising aquistas seeking health care. Pending the recovery of your family, free from any kind of treatment, are fully available to take advantage of other capabilities that these locations provide them.

Modern tourism distinguishes itself by travel and stay in a place and the way humans express themselves in a globalized world, through the choices we make and the reasons that underlie and places to visit or attend them. In the case of tourism due to the Hydrotherapy still associated climatic, hydrological, river or sea, and even the possible nearby beaches with conditions. There has thus been reinventing health tourism, in that hydrothermal resources are and are intended as an offer differential due to the particularities of services they offer and their interconnections. To this you are not unrelated to local tourist, climate and landscape conditions, historical buildings, support services available, proximity to other structures and additional possibilities, including other seasonal activities, such as festivals or similar activities, able to attract different audiences.

Conceived as a natural space, adapted, built or cultural space involves the thermal tourism structures and diverse functions. Moves economic forces and encourages development to create interstitial population mobility between one or several locations. In summary, we can say that space tourism due hydrotherapy as a space for enjoyment and emotional landscape is virtually connected to all areas of human, cultural, social and economic life. The medicine itself has recognized that the body, mental and emotional well-being is the most effective remedy for health promotion and disease prevention (Servan-Schreiber 2003).

It is in this context that spas are the territorial basis of hydrotherapy, undergo changes over time, public policies in general, territorial reorganizations of health

policies and treatments that aim to provide. In recent times, even under the emergence of new diseases and new conceptions of body and health, have been drawing up new treatment techniques, clinical, medical and medical guidance to the range of therapies and methodologies to develop . Hence hydrotherapy to provide the development of tourism and leisure open new horizons for interim relocation of persons and groups outside their places of residence, intersecting with the playful, free time, holidays, welfare and health.

10.5 Conclusions

This reflection on the interconnection of Hydrotherapy, Hydrotherapy and health, taking into account historical social, health, political, cultural, economic and human aspirations, sought to reveal the changes that have been targeted and the impact they have come to purchase at present. Developments and aspects of this process relate, firstly, to the economic and cultural over the past decades social transformations, favoring the improvement of living conditions and the opening of new vistas about the individual and social life; secondly, with the conceptions that have been forged on the body and well-being leading to invest more in health, either in terms of both preventive and curative discount. Hence the scope that has been earned on the investment demand for a range of less conventional medicines within which hydrotherapy and wellness tourism, its health characteristics, (re) take singular meanings.

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Chapter 11
Innovation in Thermalism: An Example in Beira Interior Region of Portugal

André R.T.S. Araujo, Teresa Paiva, Maximiano P. Ribeiro, and Paula Coutinho

Abstract Portugal is one of the richest European countries in thermal waters, and the majority of the spas are located inland in the northern and central regions. Thermal spa treatment is a touristic product that is highly recognized for its potential in the exploration of endogenous regional resources. Consequently, the development of new and competitive thermal tourism products can play an important role in the development of the inland regions, contributing effectively to addressing the economic asymmetries of the region. Based on their physico-chemical properties, thermal waters can have different therapeutic indications, including in dermatology. In the region of the Beira Interior there are two spas with thermal water presenting therapeutic dermatological applications, and the use of these waters in dermocosmetic formulations is proposed as one of the most relevant applications of innovation tools in the Thermal Spa sector. A number of cosmetic companies have encapsulated active molecules in nanoscale systems to enhance product performance. The properties of the nanocarriers systems, namely liposomes, polymeric and solid lipid nanoparticles as well nanoemulsions, are fundamental to increase the skin permeation/penetration. Furthermore, these systems have the capacity to preserve the original and unique properties of the thermal water and ensure the stability of the other active components during more time. The development of dermocosmetics based on thermal water carried in nanobiotechnological systems is proposed for its contribution to the differentiation amongst local, unique and genuine products, especially relevant in the case of products with high economic impact in tourism markets.

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11.1 Introduction

11.1.1 Brief Characterization of the Central Region of Portugal

Portugal is one of the richest European countries in thermal waters (APRH 2014), and the majority of Portuguese spas are located mainly inland in the northern and central regions. The 28,199 km^2 of the Central Region of Portugal reaches from the international border with Spain to the Atlantic Ocean, with a population of 2,327,744 inhabitants. This diversified landscape includes a number of natural parks and the longest river (Mondego) whose source is in within the country, along with other hydrographic areas such as the Douro (Côa), Tejo (Zêzere), Vouga and Lis (CCDRC 2014). The Central Region has strong exports and a flexible and resilient aptitude although it is below the Portuguese average ranking for wealth. Its robust territorial asymmetry has been diminishing in recent years and its GDP per capita represents 82.2 % of the national average, with 22 % from the small and medium enterprises (SMEs) and micro businesses, which together represent 96 % of the total business in the region (CCDRC 2014).

From an industrial perspective this region show activities dependent on technology and other activities that combine technology with natural resources, with particular relevance to the inland region of the Beira Interior. This region has, also, a set of infrastructures to promote innovation, in both science and technology that covers the following areas: health, life sciences, pharmaceutical sciences, biotechnology, computer science, telecommunications, the agro food sector, forestation, creative industries, materials etc.. Here, in this region, we may also emphasize the knowledge transfer capabilities through its universities, polytechnic institutes, research centres, incubators and technology parks (CCDRC 2014).

Innovation in the last 3 years in the Central Region of Portugal has been classified as moderate but increasing and the competitiveness index puts this region in first place in terms of "labour market efficiency", second place in "higher education and training" and third place in "health", "infrastructures", "market size" and "innovation" (CCDRC 2014). These strengths in producing knowledge and innovation, together with the traditional specialisations of this territory, are based in activities that are intensive in technology and knowledge such as information and communication technologies (ICT), biotechnology, renewable energy, new materials and health.

Following European strategy, Portugal defined its own regional strategic plan for growth and development by analysing the potential characteristics of the territory and its economic agents. Doing so, a smart specialisation strategy (Del Río et al. 2014; EADA 2013) was created for the Central Region of the country, where the Beira Interior region is located. In the plan some regional strengths were identified that should be embraced by the regional economic actors as opportunities of research and innovation and economic development. The diversity of the natural patrimony

and natural resources (e.g. 18 thermal resorts) and the fact that this region is classified as a European Region of Reference for the active and healthy ageing (CCDRC 2014; del Rio et al. 2014; Álvarez García et al. 2013a) and even earned the EER label – European Entrepreneurial Region (CCDRC 2013) offers the opportunity to businesses to choose Tourism as a sector for investment, innovation and the possibility for offering differentiation and being competitive.

The territorial positioning of this region in terms of quality, innovation and entrepreneurship and the smart specialisation strategic axis in tourism, in particular, has created the opportunity to link business investment to the natural advantages of the territory such as Health Tourism and Thermal Tourism (CCDRC 2013).

Some research studies (CCDRC 2014; Holmquist 2004) conducted in the inland region of the Beira Interior have emphasised the very fragile basis of interactiveness among the regional agents dedicated to innovation, a situation that profoundly restricts the capacity to foster a regionally-based innovation system. Because of this, the appeal of the tourism sector and touristic products (in this case, thermal-based products) is very significant, presenting this sector itself as an essential tool in regional development, as a means to avoid regional desertification and stagnation while stimulating the potential of the more undeveloped regions (CCDRC 2014; CSSMEU 2012).

11.1.2 Knowledge Transfer and the Strategic Positioning of the Region

In a region that makes research and innovation as one of its flagships to develop, create competiveness and that defined their strategic axes as priorities it's natural that researchers and economic agents work together to achieve and implement those ideas as entrepreneurial projects (Rosted 2005).

In doing so, they could look to innovation in different perspectives as a key competitive factor which distinguishes three sources of innovation: price competition; new research and technology; and non-recognised customer needs. This last approach is based on the consumer needs and it implies that businesses are interested in providing consumers with products that have a special value or experience.

This new approach requires that enterprises map consumer needs and use them as a source of non-recognised innovation. Many of these innovations apply existing technologies or new combinations of existing ones. To do so, businesses must have access to sophisticated technological skills that might not be available (Álvarez García et al. 2013a; Holmquist 2004). Most SMEs simply do not have this level of research and technological development (R&D), which is why they welcome partnerships with the research centres and Higher Education Institutes (HEI) to not only innovate but also to integrate new technologies in their processes and to develop new products with high added value.

These centres of scientific research are habilitated to offer a service innovation that comprises new or significantly improved concepts for services and products (CSSMEU 2012). Their transformative power comes from disrupting the traditional channels to market business process and models, and enhance consumer experience as a whole.

In the current tourism sector, the relationship between R&D centers and firms is increasingly relevant the relationship between R&D centers and the enterprises. The connection between spas and these research centers crucial namely through development of new technologies and appropriate use of resources through coordinated research and combined efforts. There are many fields of study in the region, where R&D plays an important role like in analyzing the level of quality control of waters or in researching new resources and discovering new potential uses, products or services, namely in cosmetic development as a strand of the Health/Personal Care Cluster (ATP 2008).

The current international R&D scenario in the field of dermatocosmetology reflects a focus on the development of dermocosmetic products based on nanobiotechnology. Following this trend our SMEs took notice that Portuguese consumer needed this type of products since the Health tourism, from the perspective of well-being, is growing each year (ATP 2008; Silva 2012) and the higher prices of imported dermocosmetics place restraints on consumer demand and the competitiveness of the business in the region of the Beira Interior of Portugal.

11.1.3 General Characterisation of Thermal Waters of Portugal

Portugal is one of the richest European countries in terms of thermal waters (APRH 2014), where thermal spa treatment comprises the use of natural mineral water and other complementary means in therapy, rehabilitation and prevention of a number of diseases as well as in the promotion of well-being (Decreto-Lei.n.°142/2004). The use of these waters for therapeutic purposes, also known as mineral-medicinal water, has always aroused interest in carrying out the characterisation of this type of water for the treatment of a specific condition.

Thermal waters can be defined by waters from the subsoil, which are generated in specific geological conditions presenting "physico-chemical dynamism". They share three fundamental characteristics: their natural origins from the earth 'springs', their bacterial purity and their therapeutic potential (Ghersetich et al. 2000; Matz et al. 2003). Most thermal waters originate from the water resulting from precipitation, and with its deep infiltration, these waters acquire particular physico-chemical characteristics, depending on the mineralogical composition of the geological formations that the waters flow through. In fact, the geological variability in Portugal enables the occurrence of thermal waters with a high diversity based on physico-chemical composition (APRH 2014).

Thermal waters are classified according to parameters such as temperature, osmotic pressure, radioactivity and, especially, with great importance, mineralisation and chemical composition (Alexandre and Malcata 2000). On the basis of their

mineralisation, waters may be classified as oligomineral waters (mineralisation <200 mg L^{-1}), medium mineral waters (mineralisation between 200 and 1,000 mg L^{-1}) and mineral waters (mineralisation above 1,000 mg L^{-1}) (Ghersetich et al. 2001). They are classified as sulphurous, bicarbonate, carbonic, sulphated, arsenical and ferruginous water on the basis of their chemical content, depending on the relative presence of these minerals in a ponderable amount (Ghersetich et al. 2001).

The various therapeutic effects described with thermal therapy have been attributed to the physico-chemical composition of the waters, classified as bicarbonated, sulphated, chlorided, sulphurous, hyposaline and gasocarbonic waters. This correlation has been the basis for the indication of the different thermal spas for different disorders of a number of vital systems; it is precisely in this context that the existing data are the most controversial. From a simplistic and reductionist point of view, most Portuguese thermal waters are described as weakly mineralised, sulphurous, bicarbonate or chlorinate and sodium-type waters.

11.2 Categorisation of Therapeutic Indications for Thermal Waters in the Region of the Beira Interior of Portugal

In the central region of Portugal, specifically in the region of the Beira Interior region, eight thermal spas offer distinct therapeutic indications (Table 11.1) approved by the national health authority (Direção Geral da Saúde), in spite of their generically similar chemical cataloguing attributed for all Portuguese thermal waters. Furthermore, after having created a complete listing of the physico-chemical composition of the thermal waters of the region of the Beira Interior (Table 11.2), the major components of the thermal waters were demonstrated to have particular therapeutic actions and hence serve as a useful tool for regional typology of these thermal waters (Araujo and Coutinho 2012).

Table 11.1 Therapeutic indications of thermal waters of the Beira Interior (Direção Geral da Saúde 2014)

Thermal spas	Endocrine-Metabolic	Circulatory system	Respiratory system	Digestive system	Urinary system	Skin	Rheumatic and musculoskeletal
Caldas da Cavaca			x	x			x
Caldas de Manteigas			x				x
Cró			x			x	x
Fonte Santa de Almeida			x				x
Longroiva			x				x
Monfortinho	x	x	x	x	x	x	x
Penamacor			x				x
Unhais da Serra		x	x	x			x

Source: Author's

Table 11.2 Detailed physico-chemical composition of thermal waters of the Beira Interior region (Data obtained from Direcção-Geral de Energia e Geologia)

Physico-chemical composition		Caldas da Cavaca	Caldas de Manteigas	Cró	Fonte Santa de Almeida	Longroiva	Monfortinho	Penamacor	Unhais da Serra
Physico-chemical constants and non-dissociated substances	Temperature emergency (°C)	nd	nd	nd	nd	nd	nd	nd	nd
	pH	8.35	9.4	8.13	8.51	8.84	5.88	8.23	8.36
	Conductivity (μS/cm)	343	208	437	446	530	33.5	310	281
	Total alkalinity (in HCl 0.1N)	129	12.7	27.5	31.1	152	6.9	154	71.1
	Total hardness (in $CaCO_3$)	15	0,8	1.0	1.0	7.0	7.4	2.4	9.1
	Silica (mg/L)	56	34.7	47.8	38.1	65	18.6	38	51
	Total sulfur (in I_2 0.01N)	3.6	6.8	16.9	12.1	46	–	13	11
	Dry residue (mg/L)	262	168	302	314	384	36	231	219
Cations (mg/L)	Litium (Li^+)	0.44	0.12	0.69	0.35	0.76	–	1.1	0.30
	Sodium (Na^+)	80	47.1	103	109	128	3.4	77	66
	Potassium (K^+)	2.8	0.9	2.7	1.8	7.5	0.62	1.3	2.2
	Magnesium (Mg^{2+})	0.11	<0.05	0.21	0.17	<0.10	1.2	0.19	0.14
	Calcium (Ca^{2+})	5.9	3.0	3.5	3.8	2.8	0.98	0.66	3.4
	Iron (Fe^{2+})	<0.03	–	–	–	<0.03	<0.003	<0.03	<0.03
	Ammonium (NH_4^+)	0.06	<0.04	0.06	0.11	0.7	<0.05	0.20	0.08
Anions (mg/L)	Fluoride (F^-)	14	10.8	15.7	15.0	23	<0.1	3.9	14
	Chloride (Cl^-)	21	6.8	33.0	36.9	45	3.8	13	24
	Bicarbonate (HCO_3^-)	155	45	157	177	148	8.5	183	81.4
	Sulphate (SO_4^{2-})	2.1	11.8	14.1	11.4	12	1.3	1.6	13
	Nitrates (NO_3^-)	<0.3	<0.10	<0.20	0.21	<0.3	1.9	<0.3	<0.3
	Nitrites (NO_2^-)	<0.010	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010
Total mineralisation (mg/L)		285	190	381	402	493	41	285	209

Source: Author's
nd not determined

All these thermal waters share therapeutic orientations for respiratory, rheumatic and musculoskeletal systems due to their sulphurous quality, with the exception of Monfortinho thermal water. The antiseptic properties of sulfur enable the use of these waters in the respiratory mucosa and their action on injured cartilage in certain rheumatic affections (Jaltel 2001). They are all also bicarbonated, reinforcing their therapeutic use on the respiratory system. Bicarbonate ions modify the acidic environment of tissues with phlogosis, promoting the removal of inflammation (Faílde 2006).

Two spas with thermal waters presenting dermatologic therapeutic effects are Monfortinho and Cró. Monfortinho thermal water is an oligomineral water whose main components are bicarbonate, sodium and silica, which together represent more than 50 % of their total mineralisation and confer the potential for dermatologic effect. The Cró thermal water is a medium mineral water, containing several mineral salts that give this water its peculiar chemical composition. Analysing the physico-chemical composition of this thermal water in detail, a relationship between its composition and the dermatological therapeutic effect can be established since it is a sulphurous water, rich in silica and in certain cations with important functions for the skin.

Table 11.3 describes some effects of the chemical elements present in thermal waters, namely sulfur, silica, sodium, calcium and potassium, on the skin.

11.3 Skin Structure and Challenges for Dermocosmetic Formulations Development Based on Thermal Water

Thermal waters with specific properties, as described in Table 11.3, are commonly used for the treatment (or the therapeutic support) of different dermatologic conditions, such as atopic dermatitis, contact dermatitis, seborrhea, seborrheic dermatitis,

Table 11.3 Effects on the skin of some chemical elements present in thermal waters (Faílde and Mosqueira 2006)

Chemical element	Skin effects
Sulfur	Cellular regenerator. Keratoplastic or keratolytic (depending on the dose). Antioxidant. Antibacterial. Antifungal
Silica	Involved in the synthesis of collagen and elastin. Participates in cellular metabolism. Abrasive in psoriatic plaques. Emollient effect
Sodium	Participates in the fluid balance of tissues
Calcium	Regulates cell division, acting on the calmodulin and on the binding protein of retinoic acid. Catalyzes the activity of enzymes of differentiation: transglutaminase, phospholipase and protease. Regulates the permeability of cell membranes. Regulates the proliferation and differentiation of keratinocytes
Potassium	Involved in the synthesis of nucleic acids and proteins. Participates in cellular energy production

Source: Author's

psoriasis and ichthyoses (Chevutschi et al. 2007; Faílde and Mosqueira 2006; Ghersetich et al. 2000; Halevy and Sukenik 1998; Lotti and Ghersetich 1996; Matz et al. 2003; Merial-Kieny et al. 2011b; Nunes and Tamura 2012; Panico and Imperato 2009; Tabolli et al. 2009).

Thermal water therapy is safe, effective and pleasant for patients and there are almost no side effects during or after treatment (Matz et al. 2003).

The waters used to treat dermatologic conditions present different identities in terms of physico-chemical profile. The mechanisms by which these diseases are treated in spa therapy are nowadays more fully justified and scientifically supported, involving chemical, thermal, mechanical and immunological effects. Indeed, thermal waters have demonstrated different effects on the skin, from cellular renewal, skin hydration, recovery of cutaneous barrier and keratolytic effects to antimicrobial activity, detergent property, antioxidant capacity and anti-inflammatory activity (Nunes and Tamura 2012).

Skin physiology must be respected in the development of dermocosmetics (Gupta et al. 2013). As the outermost organ of the body, skin accounts for about 15 % of total adult body weight, performing many vital functions, including protection against external physical, chemical, and biologic assailants, water retention inside the body and thermoregulation (Bolzinger et al. 2012; Goodwin 2011). Human skin is organized in three anatomically distinct layers: the epidermis, dermis and hypodermis. The epidermis has an important role in the permeability of skin because its outermost layer (*stratum corneum*) is hydrophobic. Under normal conditions, a hydrophilic substance such as water cannot penetrate the skin easily (Bolzinger et al. 2012). Because of this, skin hydration and epidermal barrier function have long been active areas of academic and industry research (Gupta et al. 2013) since adequate skin hydration is crucial to the preservation of healthy skin (Verdier-Sévrain and Bonté 2007). In order to overcome this challenge, the cosmeceutical/cosmetics industry has been applying nanobiotechnology in the creation and incorporation of new and effective delivery systems in their products (Greßler et al. 2010; Raj et al. 2012).

11.3.1 Nanobiotechnology and Cosmetics Formulations: A Review

Nanobiotechnology is the science of manipulating atoms and molecules on a nanoscale (Raj et al. 2012), the application of which has developed tremendously in recent years (Mihranyan et al. 2012) although it was implemented very early in the cosmetics sector. Between 2000 and 2010, L'Oreal SA (France) was the first cosmetic company in the ranking of world-wide companies with nanotechnology-related patents and very early on first applied nanobiotechnology in cosmetics. Lancôme launched a cream with nanocapsules of pure vitamin E to combat ageing

of the skin (Mihranyan et al. 2012; Raj et al. 2012) and, in 1986, Dior presented Capture® antiageing cream, the first liposomal cosmetic product (Müller et al. 2002). Almost all the major cosmetic companies, such as Mustela, Artdeco, Nivea, Avon, The Body Shop, Revlon, Chanel, Skinceuticals, Estée Lauder, Shiseido, Garnier, and Boticario, are examples of entrepreneuring companies in this sector that have products based on nanobiotechnology (Mihranyan et al. 2012; Raj et al. 2012).

The vast influence of nanobiotechnology in the cosmetics industry is due to the improvement of cosmetics properties achieved by nanocarriers related to the improvement of delivery, bioavailability and targeting of active principles to skin, with higher performance than the conventional products and without causing irritation. These vehicles are extensively researched and the result is the promotion of many advantages of nanobiotechnology over traditional formulations (Mihranyan et al. 2012; Padamwar and Pokharkar 2006), because they:

(i) target specific, controlled release and optimisation of the availability of cosmetic agents with higher periods of permanence of active substances on the skin;
(ii) improve the stability of various cosmetic ingredients not stable or sensitive to temperature, pH, light or oxidation, like unsaturated fatty acids, vitamins, or antioxidants, by encapsulation within the nanocarriers;
(iii) enhance penetration of certain ingredients, such as vitamins and other antioxidants;
(iv) reduce the amount of agents and additives in products;
(v) improve shelf life and hence greater product efficacy;
(vi) increase the efficacy and tolerance of UV filters on the skin surface;
(vii) make the product more aesthetically pleasing (e.g. in mineral sunscreens, making the particles of the active mineral smaller allows them to be applied without leaving a noticeable white cast).

Many biodegradable and biocompatible materials (synthetic and natural) are used for the development of vehicular systems. The main advantages of using biodegradable polymers over non-biodegradable polymers in cosmetics applications is that they are generally non-reactive when in contact with the human body and can be broken down or metabolized and removed from the body via normal metabolic pathways, avoiding possible side effects, due to their properties of biocompatibility and biodegradability (Ammala 2013).

Polymers are some of the most common materials in encapsulation carriers for delivery systems in dermatology and cosmetology. They are derived from natural polymers, particularly modified polysaccharides, such as starch and chitosan, as well as natural or synthetic lipids and phospholipids, like phosphatidylcholine, and polyesters based on polylactide, polyglycolide and their copolymers (Mihranyan et al. 2012). Based on these materials, and taking into account their specific physicochemical properties, the principal nanocarriers in cosmetics development are nanoemulsions and liposomes as well as polymeric and solid lipid nanoparticles.

11.3.1.1 Liposomes

Liposomes are a well-known and frequently used vesicular delivery system of active substances in drugs and cosmetics alike. These concentric bilayered vesicles of phospholipids can fuse with other bilayers such as the cell membrane, which promotes release of its contents, making them useful for cosmetic delivery applications to enhance the penetration of active principles through the skin (Raj et al. 2012). Liposomes measure between 20 nm and a few μm in diameter and, due to their hydrophilic core, they can encapsulate, amongst other substances, water-soluble agents and retain a small amount of liposoluble substances in the space between the bilayer membranes (Greßler et al. 2010).

11.3.1.2 Nanoemulsions

Nanoemulsions are very fine emulsions of oil in water with a dispersion of droplets that measure approximately 50–1,000 nm. These transparent and fragile droplets have a single layer of phospholipids surrounding an oily liquid core. Their smaller particle size provides higher stability and better suitability to carry active ingredients, mainly liposoluble agents, greatly increasing the product shelf life; they also have good sensorial properties (merging textures), specific biophysical properties (especially hydrating power) and penetrate and/or permeate the skin more deeply, probably due to their flexibility and affinity to *stratum corneum* (Greßler et al. 2010; Gupta et al. 2013; Patravale and Mandawgade 2008; Raj et al. 2012).

11.3.1.3 Nanoparticles Systems

Polymeric Nanoparticles

Polymeric nanoparticulate systems include nanocapsules and nanospheres with diameters of less than 1 μm (Guterres et al. 2007) that are used not only to make substances more compatible but also to protect from oxidation and to reduce the odor and control the release of the active substances. They are structurally stable due to their rigid matrix and are able to maintain their structure for long periods of time when topically applied. Since they are mostly retained in the *stratum corneum*, they also improve the release of active principles through the skin (Gupta et al. 2013).

Nanocapsules differ from nanospheres because of the encapsulation mechanisms of the bioactive molecules in their matrix, which can be entrapped, dispersed, dissolved within or adsorbed. Nanocapsules are vesicular reservoir-type systems due to the presence of oil, whereas nanospheres form a matrix system provided by the polymeric chains (Guterres et al. 2007). Polymer composition for both is identical and includes biodegradable synthetic polymers, like polyamides, cross-linked polysiloxanes or modified natural products such as gelatin and albumin (Patravale and Mandawgade 2008).

Solid Lipid Nanoparticles

Solid lipid nanoparticles (SLN) are the new generation of nanoparticulate active substance vehicles developed at the beginning of the 1990s as an alternative to emulsions, liposomes and polymeric nanoparticles (Pardeike et al. 2009). Produced without solvents, SLN are formed by a matrix of lipids which are physiologically well tolerated biodegradable raw materials that have a higher affinity to stratum corneum and consequently enhanced bioavailability and protection against chemical degradation (Guterres et al. 2007; Pople and Singh 2006). SLN appear promising not only as a drug carrier system, particularly for lipophilic agents, but also for large scale production and sterilization. Nevertheless, they present some disadvantages such as low drug-loading capacities and physical instability during storage or administration due to the complexity of the physical state of the lipid (Guterres et al. 2007). In recent years use of SLN for the topical application of vitamin A, E or coenzyme Q10 has been investigated for site-specific and controlled rate of delivery through intact skin (Mihranyan et al. 2012; Pople and Singh 2006).

One of most important characteristics of some of this nanocarrier is its capacity for loading hydrophilic components. This capacity may be the key for encapsulation of thermal water.

11.3.2 Development of Nanobiotechnological Dermocosmetic Formulations Based on the Incorporation of Thermal Waters

The beneficial effects in the treatment of a number of skin diseases justifies the use of thermal waters as an active or "cosmeceutical" (or functional cosmetic) ingredient in dermocosmetic formulations. In fact, the role of the chemical components in thermal waters and their cosmetic effects has been well-established, which means that the treatment of these dermatological affections can include the use of dermocosmetic products made from thermal waters. Moreover, there is evidence that pure thermal waters have been used in dermatology as an adjunct in skin hydration when used as a vehicle or as an active principle in cosmeceutic formulations. The dermatological applications are used not only in the management of ageing skin, acne, rosacea, and other inflammatory dermatoses and in the recovery from cosmetic procedures such as chemical peels and laser treatment but also to increase the quality of life and compliance in patients with chronic disease (Draelos et al. 2006; Laquieze et al. 2007; Seite 2013; Sulimovic et al. 2002).

Over the years many cosmetic and/or dermatological compositions have been developed based on thermal waters (CN100430041C et al. 2008; EP1166762A1 et al. 2002; US5690946A et al. 1997; WO2004105717A1 et al. 2004). These include thermal waters in sprays or incorporated in cosmetic products, as previously pointed out, which have been commercially exploited by the French market leaders, Avène,

La Roche Posay, and Vichy. Having published their studies about the biological effects thermal waters, in vitro and in vivo, they have been marketing these commercial products (Merial-Kieny et al. 2011a; Seite 2013).

Nanotechnology today offers a broad range of techniques to produce different nanocarriers for transporting hydrophilic substances like thermal water (Vrignaud et al. 2011). The properties of the nanocarrier systems such as size, hydrophobicity and charge are fundamental in the controlled release to increase the permeation/penetration of the water on the skin, which in turn enhances the biological effects of thermal waters (Patravale and Mandawgade 2008). Polymer nanoparticles seems to be a good/attractive choice once their process feasibility and repeatability, their controlled physicochemical properties, their low cost, the large panel of biodegradable polymers that can be used for their generation, and the knowledge of these polymers (Miguel et al. 2014; Ribeiro et al. 2013). Within polymer nanoparticles the nanocapsules structure with an aqueous are a good candidate for transport thermal water. This carrier consist of nanoparticles exhibiting a coreeshell structure, the core being composed of liquid water, generally surrounded by a thin polymer shell. The advantages of such a structure for encapsulating hydrophilic molecules lie firstly in the high encapsulation efficiency and low polymer content compared to polymer nanospheres (Vrignaud et al. 2011).

These systems have the added advantage of preserving the original and unique properties of thermal waters and ensures the stability of the other active components over greater lengths of time. Prior to the application of the benefits of thermal waters via nanocarrier systems there had been an apparent limited absorption and stability of the salts of thermal waters through the skin; these previous limitations on the development of cosmetic formulations have been overcome with the discovery that the therapeutic effect appears to lie in the local interaction between the mineral water and the structure of the skin surface (Matz et al. 2003). Nanocarrier systems present an opportunity to better exploit the richness of the Beira Interior thermal waters in the cosmetic field. The thermal water at the spas of Monfortinho and Cró, for example, have a chemical composition similar to some thermal waters that are currently used in the treatment of skin diseases and in cosmetic products (Araujo and Coutinho 2012). Although the Portuguese waters have yet to be used for these purposes, their incorporation in cosmetic preparations will be a valuable asset The key for this development relies on performing studies to assess adequate physical and mechanical properties (e.g. by the determination of pH, rheological behaviour and texture), in addition to the development of specific and nanoresponsive formulations and biometric testing to evaluate the effectiveness and safety of these thermal water-based products on the skin. The cosmetic products will then be applied not only to improve the properties of the skin in terms of moisturizing, flexibility and elasticity, but also to increase their anti-inflammatory, calming, desensitizing, healing and anti-oxidant effects (Faílde and Mosqueira 2006). Developing these thermal water-based products could be an important contribution to the cosmetic field, one of utmost importance in expanding horizons for the treatment of specific organic or functional skin disorders such as psoriasis, eczema and atopic dermatitis, either solely or as an adjuvant to more specific treatments.

11.4 Conclusions

Beyond its economic impact, thermal spa tourism effects the well-being of the local populations through other types of infrastructures and services including but not limited to the preservation of heritage, job creation and territorial anchoring of populations, as well as the overarching effects of the region's image in the community.

According to a study made by the Portuguese Tourism Confederation covering spas, thermal spas and thalassotherapy, for most spas located in the inland region, every €100 of tourist spending at a spa will generate a total effect (direct, indirect and induced) of between €70 and €80 in the regional economy. This means that by offering a bigger package of thermal spa tourism products, tourists may consume more and consequently contribute more to the regional wealth.

From the perspective of supply and demand, Turismo Portugal (a state organization to management Tourism in Portugal) studied the effects of promotions for thermal resorts of the Central region in 2011 and found that the response of more than 65,000 tourists who, while representing a growth of 17 % from the previous year also reported 89 % improvement in their well-being and pleasure. Annual revenues for 2011 in this area grew 2 %, in keeping with their annual growth which has been constant since 2005. This prediction of constant and future growth for this tourism sector makes it clear that investment in product differentiation in the thermal spa business will have an increasing impact in local economy.

Nanobiotechnological innovation applied to dermocosmetic products based on natural resources like thermal waters will have an effective impact on the economic context of this sector, particularly in the inland region. In the regional economy, the direct effects of thermal spa tourism, through the demand for goods and services (accommodation, catering, local businesses, recreation and leisure services etc.) are as evident as the indirect effects of the benefits from the supply of different dermocosmetic products to consumers.

The development of dermocosmetics with therapeutic potential based on thermal waters carried in nanobiotechnological systems is proposed for its contribution, as an innovative user-driven service, to the differentiation of local, unique and genuine products that take on a special relevance for the development of products with high economic impact in touristic markets for health and well-being.

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Marta Peris-Ortiz · José Álvarez-García *Editors*

Health and Wellness Tourism

Emergence of a New Market Segment

This book aims to contribute to the literature and aid in developing a theoretical and practical framework in the area of health and wellness tourism. With contributions and research from different countries using a practical approach, this book is an essential source for students, researchers and managers in the health and wellness tourism industry.

Recently, there has been an increased interest in health and wellness due to greater life expectancy, aging populations, increasing levels of stress among others. In this context, the concepts of health, wellness, beauty, relaxation, and tourism can be combined to satisfy the needs of people seeking better quality-of-life. This has given rise to *health and wellness tourism*, a new market segment that contributes to employment and economic growth in the new economy.

Health and wellness tourism involves two aspects: therapeutics, which seeks to cure certain diseases; and relaxation and leisure. As an alternative to traditional tourism, health and wellness tourism provides a new means of achieving regional and local development from a demographic, social, environmental and economic point-of-view. It contributes to tourist destinations' economic growth, acting as a pillar to support other complementary activities. In short, health and wellness tourism contributes to employment growth and regional wealth, contributes to tourism seasonality, promotes quality in tourism destinations, helps create new tourist services with high value, promotes establishment of international cooperation networks, and yields a number of additional benefits. Featuring a variety of programs and initiatives from different regions, with an emphasis on thermal and thalassotherapy establishments, this volume sheds light on this emerging market segment and its implications for economic and policy development.

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